

REPLACEMENT RESERVE REPORT FY 2010 NEWINGTON COMMUNITY ASSOCIATION



Prepared for:

Newington Community Association

Lori Randall

P. O. Box 351
Springfield, Virginia 22150
703-455-0013

Consultant:

millerdodson | Capital
ASSOCIATES Reserve
Consultants

929 West Street, Suite 310
Annapolis, MD 21401
Tel: 410.268.0479
Fax: 410.268.8483
www.mdareserves.com

REPLACEMENT RESERVE REPORT FY 2010
NEWINGTON COMMUNITY ASSOCIATION

millerdodson | Capital
ASSOCIATES Reserve
Consultants

Intentionally Left Blank

REPLACEMENT RESERVE REPORT

NEWINGTON COMMUNITY ASSOCIATION Newington, Virginia



Scope. Newington Community Association is a residential community located in Newington, Virginia. Newington was constructed beginning in 1972. The community consists of 85 single family residences and 524 townhouses with a total of 609 units. The survey examined the common elements of the property, including:

- Asphalt roads, paths, and parking areas.
- Concrete sidewalks and curb and gutter.
- Retaining walls and fencing.
- Swimming pool, tennis court, tot lots, and ball field.
- Community building exterior and interior.

Level of Service. This study has been performed as a Level II Update, With Site Visit/On-Site Review as defined under the National Reserve Study Standards that have been adopted by the Community Associations Institute. As such, the component inventory is based on the study that was performed by Miller - Dodson Associates on October 20, 2006. This information was adjusted to reflect changes to the inventory that were provided by the community manager, and the quantities were adjusted accordingly from field measurement and/or quantity takeoffs from to-scale drawings. The condition of all commonly-owned components was ascertained from a site visit and the visual inspection of each component by the Analyst. The life expectancy and the value of components are provided based in part on these observations. The fund status and funding plan have been derived from analysis of this data.

Section A Introduction

Section B Common

Section C Townhouse Streets

Section D Condition Assessment

Section E Attachments

Appendix

Purpose. The purpose of this Replacement Reserve Study is to provide Newington Community Association (hereinafter called the Association) with an inventory of the common community facilities and infrastructure components that require periodic replacement. The Study includes a general view of the condition of these items and an effective financial plan to fund projected periodic replacements.

- **Inventory of Items Owned by the Association.** Section B Replacement Reserve Inventory lists the Projected Replacements of the commonly owned items that require periodic replacement using funding from Replacement Reserves. The Replacement Reserve Inventory also provides information about excluded items, which are items whose replacements are not scheduled for funding from Replacement Reserves.
- **Condition of Items Owned by the Association.** Section B Replacement Reserve Inventory includes our estimates of the normal economic life and the remaining economic life for the projected replacements. Section C Calendar of Projected Annual Replacements provides a year-by-year listing of the projected replacements. Section D Condition Assessment provides additional detail for items that are unique or deserving of attention because of their condition or the manner in which they have been treated in this Study.
- **Financial Plan.** The Association has a fiduciary responsibility to protect the appearance, value, and safety of the property and it is therefore essential the Association have a financial plan that provides funding for the projected replacements. In conformance with American Institute of Certified Public Accountant guidelines, Section A Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves by two generally accepted accounting methods; the Cash Flow Method and the Component Method. Section A Replacement Reserve Analysis includes graphic and tabular presentations of these methods and current Association funding. An Executive Summary of these calculations is provided on Page A1.

Basis. The data contained in this Replacement Reserve Study is based upon the following:

- The Request for Proposal submitted and executed by the Association.
- Our visual evaluation and measurements on August 19, 2009. Miller - Dodson Associates has visually inspected the common elements of the property in order to ascertain the remaining useful life and the replacement costs of these components.

Engineering Drawings. No architectural drawings or engineering site plans were available for review in connection with this study. We recommend the Association assemble a library of site and building plans of the entire community. Reproducible drawings should be stored and kept in a secure fireproof location. The Association will find these drawings to be a valuable resource in planning and executing future projects.

Acknowledgement. Miller - Dodson Associates would like to acknowledge the assistance and input Ms. Lori Randall. Ms. Randall provided very helpful insight into the current operations at the property.

Analyst's Credentials. Mr. Horace B. Jones graduated from the U.S. Naval Academy and from Rensselaer Polytechnic Institute with a Civil Engineering Degree. Mr. Jones has held various management positions in the real estate development and construction fields in the last 25 years. He is currently a Reserve Specialist (RS) for Miller - Dodson Associates.

Respectfully submitted,
MILLER - DODSON ASSOCIATES, INC.

Horace Jones
Reserve Specialist

EXECUTIVE SUMMARY

The Newington Common Areas Replacement Reserve Inventory identifies 86 Projected Replacements for funding from Replacement Reserves, with an estimated one-time replacement cost of \$1,030,540.

The Replacement Reserve Analysis calculates recommended funding of Replacement Reserves by the two generally accepted methods, the Cash Flow Method and the Component Method. The Analysis also evaluates current funding of Replacement Reserves, as reported by the Association. The calculations and evaluation are summarized below:

\$51,481 CASH FLOW METHOD MINIMUM ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2010.

\$7.04 Per unit (average), minimum monthly funding of Replacement Reserves

The Cash Flow Method (CFM) calculates Minimum Annual Funding of Replacement Reserves that will fund Projected Replacements identified in the Replacement Reserve Inventory from a common pool of Replacement Reserves and prevent Replacement Reserves from dropping below a Minimum Recommended Balance.

CFM - Minimum Annual Funding remains the same between peaks in cumulative expenditures called Peak Years.

The first Peak Year occurs in 2041 which is outside of the 30-year Study Period. The Cash Flow Method - Minimum Annual Funding of Replacement Reserves remains constant at \$51,481 throughout the entire 30-year Study Period.

\$95,301 COMPONENT METHOD RECOMMENDED ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2010.

\$13.04 Per unit (average), recommended monthly funding of Replacement Reserves

The Component Method is a time tested and very conservative funding model developed by HUD in the early 1980's.

The Component Method treats each projected replacement in the Replacement Reserve Inventory as a separate account. Deposits are made to each individual account, where funds are held for exclusive use by that item.

Based on this funding model, the Association has a Current Funding Objective of \$540,294.

The Association reports having \$140,058 on deposit, which is 25.9% funded.

\$30,000 CURRENT ANNUAL FUNDING OF REPLACEMENT RESERVES (as reported by the Association).

\$4.11 Per unit (average), reported current monthly funding of Replacement Reserves

The evaluation of Current Funding, as reported by the Association, has calculated that if the Association continues to fund Replacement Reserves at the current level, there will NOT be adequate funds for Projected Replacements in 14 years of the 30-year Study Period, and a maximum shortfall of \$-142,571 occurs in 2039.

Pages A2 and A3 explain the Study Year, Study Period, Adjustments (interest & inflation), Beginning Balance, and Projected Replacements. Pages A4 to A9 explain in more detail the calculations associated with the Cash Flow Method, Component Method, and Current Funding.

REPLACEMENT RESERVE STATUS AND FUNDING PLAN

Current funding of Replacement Reserves is inadequate to fund Projected Replacements.

We recommend the Association adopt a Replacement Reserve Funding Plan based on the Cash Flow Method or the Component Method, to ensure that adequate funding is available throughout the 30-Year Study Period for the \$1,182,629 of Projected Replacements listed in the Newington Common Areas Replacement Reserve Inventory.

The Funding Plan should be professionally evaluated every three to five years or after completion of each major replacement project. The Board of Directors has a fiduciary responsibility to review the Funding Plan annually and should consider annual increases in Replacement Reserve funding at least equal to the Consumer Price Index.

REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Newton Common Areas Replacement Reserve Analysis calculations of recommended funding of Replacement Reserves by the Cash Flow Method and the Component Method, and the evaluation of the Current Funding, are based upon the same General Information; including the Study Year, Study Period, Adjustments (for interest, inflation, and/or a constant increase in annual funding), Beginning Balance, and Projected Replacements:

STUDY YEAR

The Association reports that their accounting year begins on January 1, and the Study Year, the first year evaluated by the Replacement Reserve Analysis, begins on January 1, 2010.

STUDY PERIOD

The Replacement Reserve Analysis evaluates the funding of Replacement Reserves over a 30-year Study Period that begins on January 1, 2010.

ADJUSTMENTS

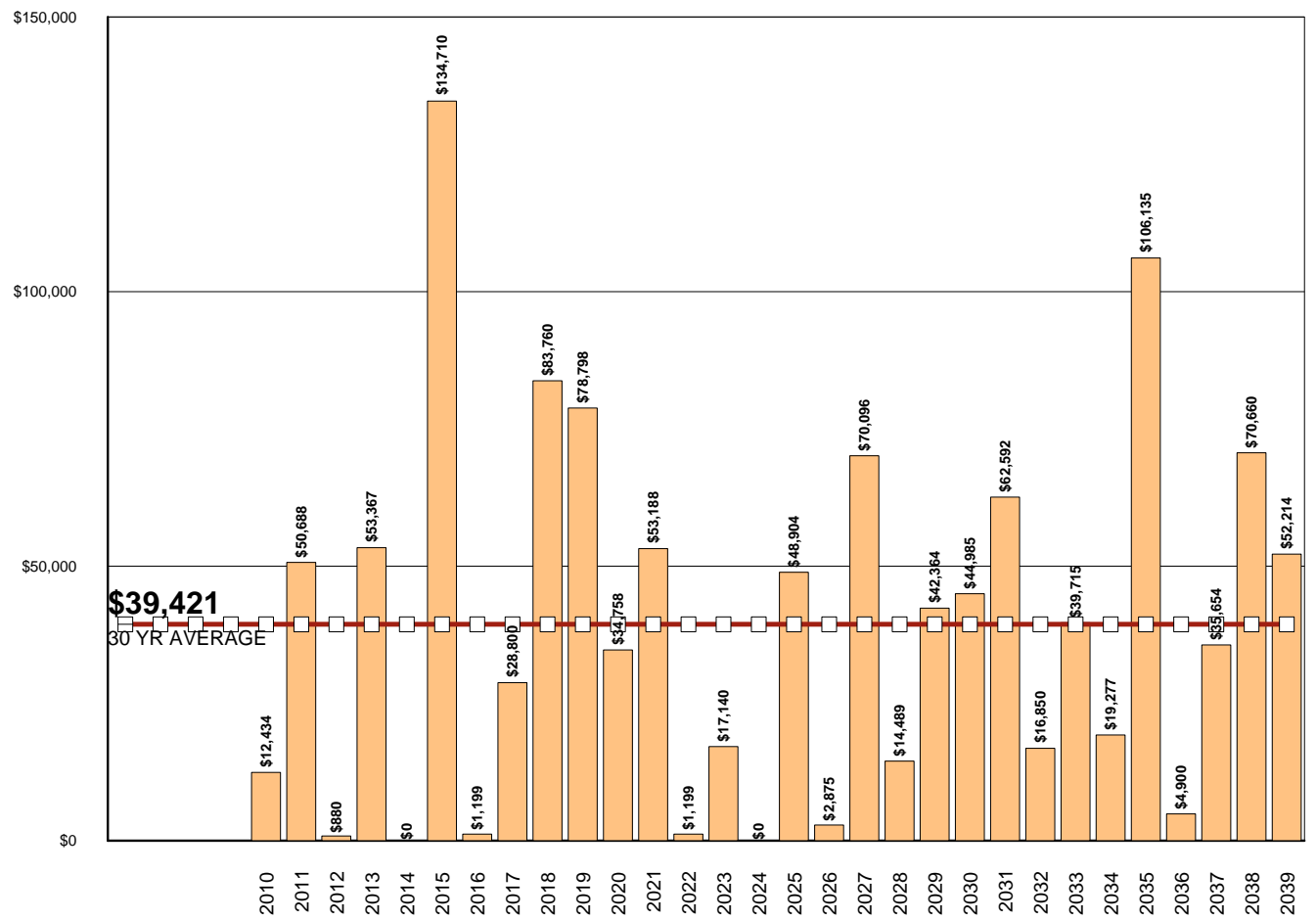
The calculations in this Replacement Reserve Analysis do not account for interest earned on Replacement Reserves, the effects of inflation on the costs of Projected Replacements, or a constant annual increase in Annual Funding of Replacement Reserves. If requested, we will provide a Replacement Reserve Analysis with adjustments for inflation, interest, and/or a constant annual increase in funding, using values provided by the Association.

BEGINNING BALANCE

The Association reports Replacement Reserves on Deposit totaling \$140,058 at the start of the Study Year.

Graph #1. Annual Expenditures for Projected Replacements

This bar graph summarizes annual expenditures for the \$1,182,629 of Projected Replacements identified in the Replacement Reserve Inventory over the 30-year Study Period. The red line shows the average annual expenditure of \$39,421.



PROJECTED REPLACEMENTS

The Newington Common Areas Replacement Reserve Inventory (Section B) identifies 86 Projected Replacements with a one-time Replacement Cost of \$1,030,540 and replacements totaling \$1,182,629 over the 30-year Study Period. Projected Replacements are the replacement of commonly-owned items that:

- require periodic replacement and
- whose replacement is to be funded from Replacement Reserves.

The Replacement Reserve Inventory also identifies 43 Excluded Items. Expenditures for the replacement of these items are NOT scheduled for funding from Replacement Reserves. The accuracy of the calculations made in the Replacement Reserve Analysis is dependent on expenditures NOT being made for Excluded Items. The rationale behind these exclusions is discussed in detail on Page B1.

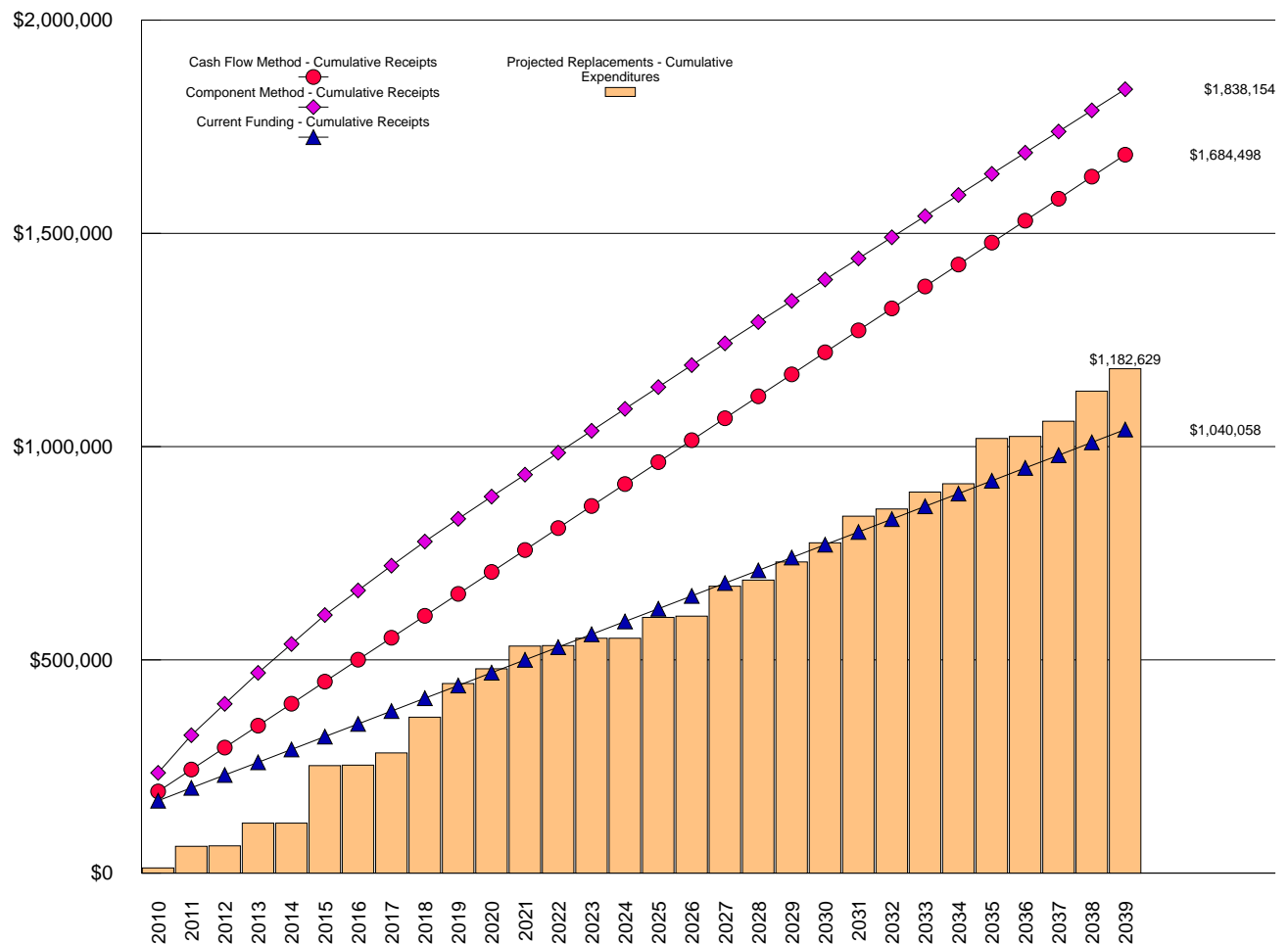
Expenditures from Replacements Reserves should be made only after consultation with an accounting professional.

The Section B - Replacement Reserve Inventory, contains Tables that list each Projected Replacement (and any Excluded Items) broken down into 11 major categories (Pages B3 to B13). Tables are also included that list each Projected Replacement by year for each of the 30 years of the Study Period beginning on Page C1.

The accuracy of this Replacement Reserve Analysis is dependent upon expenditures from Replacement Reserves being made only for the Projected Replacements specifically listed in the Replacement Reserve Inventory.

Graph #2. Comparison of Cumulative Replacement Reserve Funding and Expenditures

The line graph shows Replacement Reserves - Cumulative Receipts over the 30-year Study Period by the Cash Flow Method (red circles), Component Method (purple diamonds), and the Current Funding Plan as reported by the Association (blue triangles). The bar graph shows the Cumulative Expenditures necessary to fund the Project Replacements listed in the Replacement Reserve Inventory (Section B) and summarized in Graph #1.



CASH FLOW METHOD



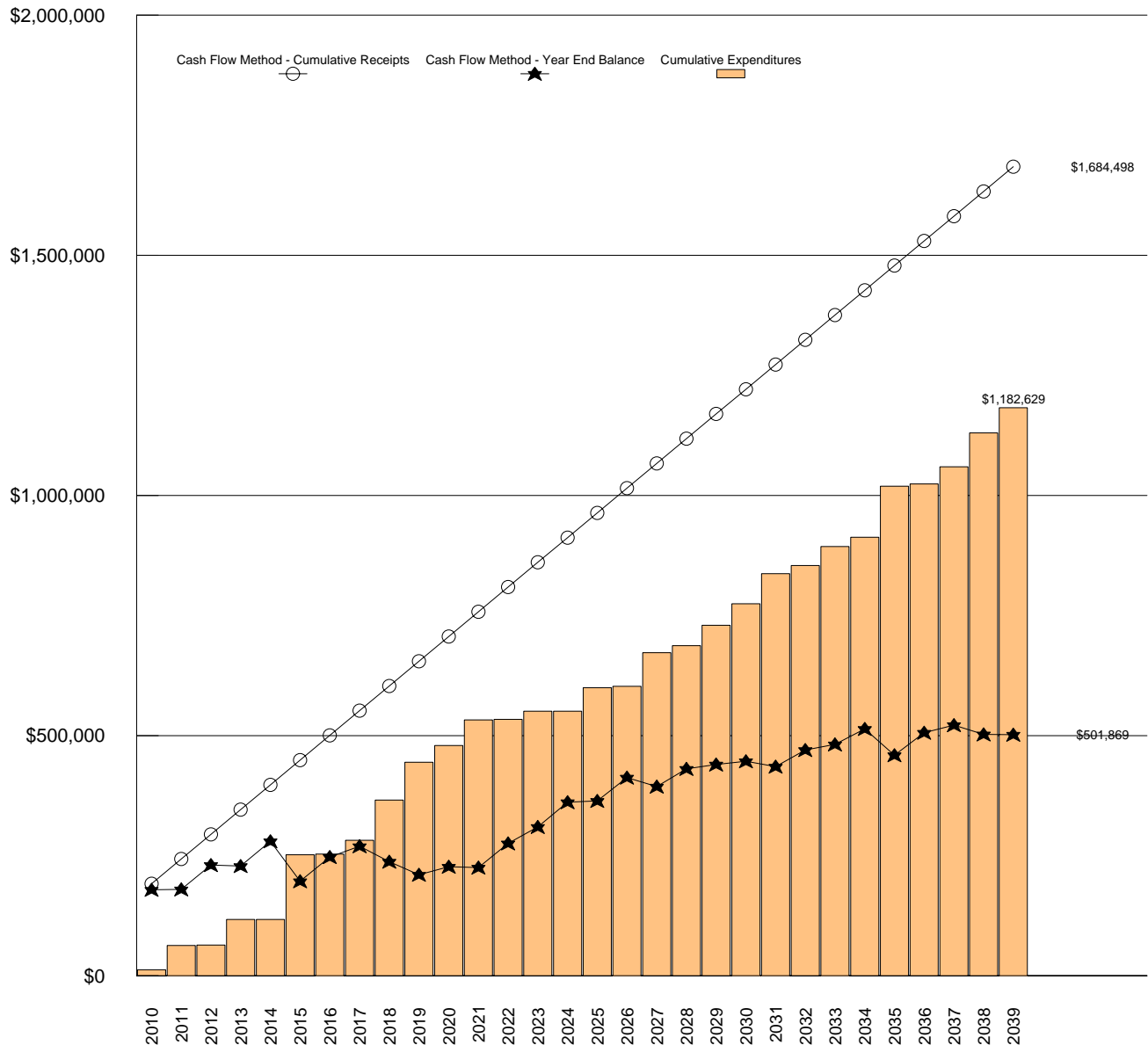
\$51,481 CASH FLOW METHOD MINIMUM ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2010.

\$7.04 Per unit (average), minimum monthly funding of Replacement Reserves

General. The Cash Flow Method is founded on the concept that the Replacement Reserve Account is solvent if cumulative receipts always exceed cumulative expenses. The Cash Flow Method calculates a MINIMUM annual deposit to Replacement Reserves that will:

- Fund all Projected Replacements listed in the Replacement Reserve Inventory (see Section B)
- Prevent Replacement Reserves from dropping below the Minimum Recommended Balance (see Page A-5)
- Allow a constant annual funding level between peaks in cumulative expenditures

Graph #3. Cash Flow Method - Cumulative Receipts and Expenditures Graph



CASH FLOW METHOD (cont'd)

- Replacement Reserves - Minimum Recommended Balance. The Minimum Recommended Balance is \$51,527, which is 5.0 percent of the one-time replacement cost of the Projected Replacements listed in the Replacement Reserve Inventory. Unless otherwise noted in the Comments on Page A-9, the Minimum Recommended Balance has been established by the Analyst based upon an evaluation of the types of items included in the Replacement Reserve Inventory.
- Peak Years. The Cash Flow Method calculates a constant annual funding of Replacement Reserves between peaks in cumulative expenditures called Peak Years. In Peak Years, Replacement Reserves on Deposit decline to the Replacement Reserves - Minimum Recommended Balance discussed in the paragraph above.
First Peak Year. The first Peak Year occurs in 2041, which is outside of the 30-year Study Period. The Cash Flow Method - Minimum Annual Funding of Replacement Reserves of \$51,481 remains the same throughout the entire 30-year Study Period.
This funding level is adequate to fund the \$1,182,629 of Projected Expenditures listed in the Replacement Reserve Inventory.
- Study Period. The Cash Flow Method calculates the recommended contributions to Replacement Reserves over the 30-year Study Period. These calculations are based upon a 40-year projection of expenditures for Projected Replacements to avoid the Replacement Reserve balance dropping to the Minimum Recommended Balance in the final year of the Study Period.
- Failure to Fund. The Cash Flow Method calculates a MINIMUM annual funding of Replacement Reserves. Failure to fund Replacement Reserves at the minimum level calculated by the Cash Flow Method will result in Replacement Reserves not being available for the Projected Replacements listed in the Replacement Reserve Inventory and/or Replacement Reserves dropping below the Minimum Recommended Balance.
- Adjustment to the Cash Flow Method for interest and inflation. The calculations in this Replacement Reserve Analysis do not account for interest earned on Replacement Reserves, the effects of inflation of the cost of Projected Replacements, or a constant annual increase in Annual Funding of Replacement Reserves.
- Comparison of Cash Flow Funding and Average Annual Expenditure. The Average Annual Expenditure for Projected Replacements listed in the Reserve Inventory over the 30-year Study Period is \$39,421 (see Graph #1). The Cash Flow Method - Minimum Annual Funding of Replacement Reserves in the Study Year is \$51,481. This is 130.6 percent of the Average Annual Expenditure, indicating that the Association is building Replacement Reserves in advance of the first Peak Year in 2041.

Table #1. Cash Flow Method Data - Years 1 through 30

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Starting balance	\$140,058									
Annual deposit	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481
Expenditures	\$12,434	\$50,688	\$880	\$53,367		\$134,710	\$1,199	\$28,800	\$83,760	\$78,798
Year end balance	\$179,106	\$179,899	\$230,501	\$228,615	\$280,096	\$196,868	\$247,150	\$269,832	\$237,553	\$210,236
Minimum rec. funding lvl.	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527
Cumulative expenditures	\$12,434	\$63,122	\$64,002	\$117,369	\$117,369	\$252,079	\$253,277	\$282,077	\$365,837	\$444,635
Cumulative receipts	\$191,539	\$243,021	\$294,502	\$345,983	\$397,465	\$448,946	\$500,427	\$551,909	\$603,390	\$654,871
Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Annual deposit	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481
Expenditures	\$34,758	\$53,188	\$1,199	\$17,140		\$48,904	\$2,875	\$70,096	\$14,489	\$42,364
Year end balance	\$226,959	\$225,253	\$275,535	\$309,877	\$361,358	\$363,935	\$412,542	\$393,928	\$430,920	\$440,037
Minimum rec. funding lvl.	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527
Cumulative expenditures	\$479,393	\$532,581	\$533,780	\$550,920	\$550,920	\$599,824	\$602,699	\$672,794	\$687,283	\$729,647
Cumulative receipts	\$706,353	\$757,834	\$809,315	\$860,797	\$912,278	\$963,759	\$1,015,241	\$1,066,722	\$1,118,203	\$1,169,685
Year	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Annual deposit	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481	\$51,481
Expenditures	\$44,985	\$62,592	\$16,850	\$39,715	\$19,277	\$106,135	\$4,900	\$35,654	\$70,660	\$52,214
Year end balance	\$446,534	\$435,423	\$470,054	\$481,821	\$514,026	\$459,372	\$505,953	\$521,781	\$502,602	\$501,869
Minimum rec. funding lvl.	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527	\$51,527
Cumulative expenditures	\$774,632	\$837,224	\$854,074	\$893,789	\$913,066	\$1,019,201	\$1,024,101	\$1,059,755	\$1,130,415	\$1,182,629
Cumulative receipts	\$1,221,166	\$1,272,647	\$1,324,129	\$1,375,610	\$1,427,091	\$1,478,573	\$1,530,054	\$1,581,535	\$1,633,017	\$1,684,498

COMPONENT METHOD

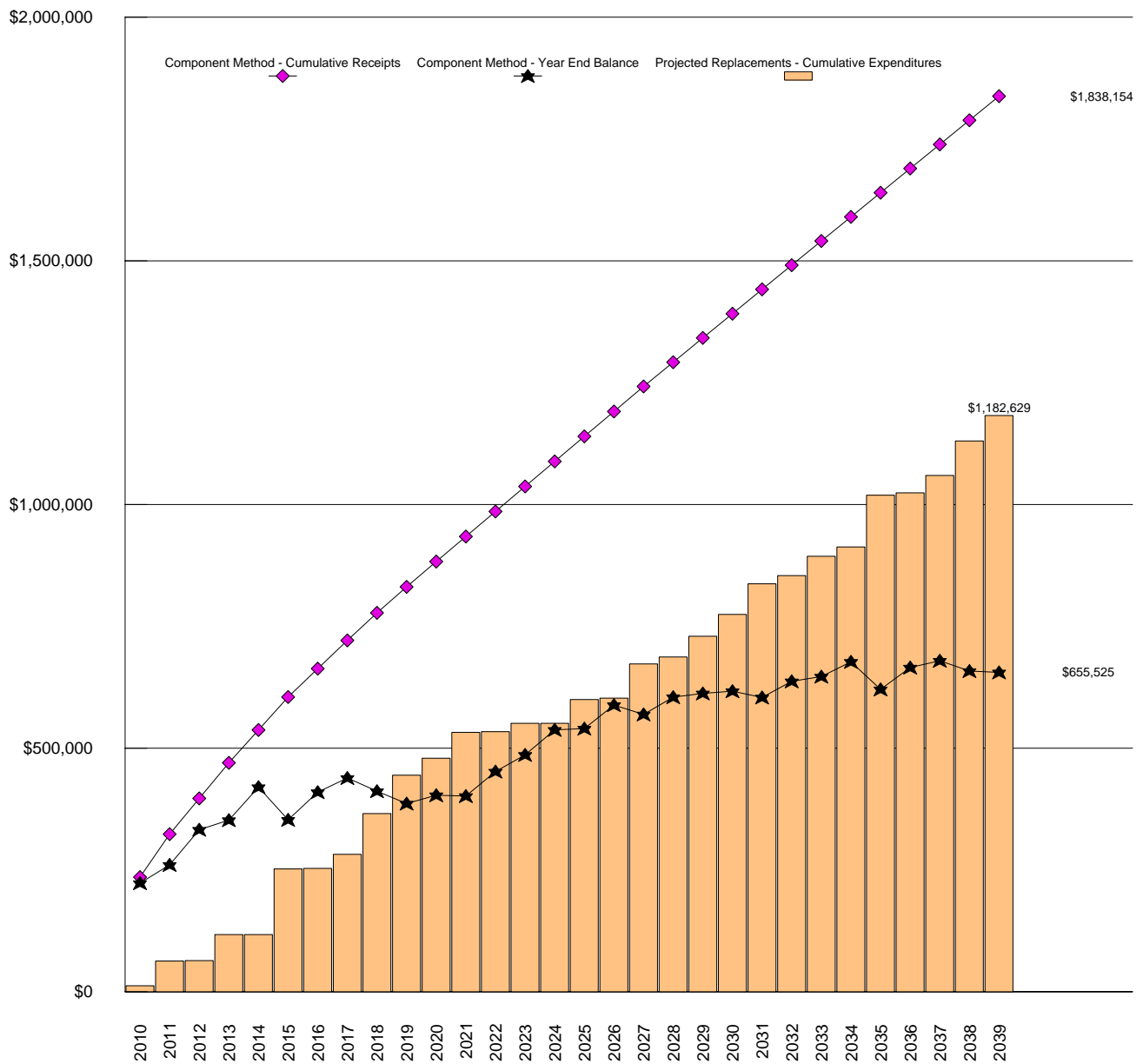


\$95,301 COMPONENT METHOD RECOMMENDED ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2010.

\$13.04 Per unit (average), recommended monthly funding of Replacement Reserves

General. The Component Method is a time tested and very conservative mathematical model developed by HUD in the early 1980s. Each of the 86 Projected Replacements listed in the Replacement Reserve Inventory is treated as a separate account. The Beginning Balance is allocated to each of these individual accounts, as is all subsequent funding of Replacement Reserves. These funds are "locked" in these individual accounts and are not available to fund other Projected Replacements. The calculation of the Recommended Annual Funding of Replacement Reserves is a multi-step process outlined in more detail on Page A7.

Graph #4. Component Method - Cumulative Receipts and Expenditures Graph



COMPONENT METHOD (cont'd)

- **Current Funding Objective.** A Current Funding Objective is calculated for each of the Projected Replacements listed in the Replacement Reserve Inventory. Replacement Cost is divided by the Normal Economic Life to determine the nominal annual contribution. The Remaining Economic Life is then subtracted from the Normal Economic Life to calculate the number of years that the nominal annual contribution should have been made. The two values are then multiplied to determine the Current Funding Objective. This is repeated for each of the 86 Projected Replacements. The total, \$540,294, is the Current Funding Objective.

For an example, consider a very simple Replacement Reserve Inventory with one Projected Replacement, a fence with a \$1,000 Replacement Cost, a Normal Economic Life of 10 years, and a Remaining Economic Life of 2 years. A contribution to Replacement Reserves of \$100 (\$1,000 + 10 years) should have been made in each of the previous 8 years (10 years - 2 years). The result is a Current Funding Objective of \$800 (8 years x \$100 per year).

- **Funding Percentage.** The Funding Percentage is calculated by dividing the Beginning Balance (\$140,058) by the Current Funding Objective (\$540,294). At Newington Common Areas the Funding Percentage is 25.9%
- **Allocation of the Beginning Balance.** The Beginning Balance is divided among the 86 Projected Replacements in the Replacement Reserve Inventory. The Current Funding Objective for each Projected Replacement is multiplied by the Funding Percentage and these funds are then "locked" into the account of each item.

If we relate this calculation back to our fence example, it means that the Association has not accumulated \$800 in Reserves (the Funding Objective), but rather at 25.9 percent funded, there is \$207 in the account for the fence.

- **Annual Funding.** The Recommended Annual Funding of Replacement Reserves is then calculated for each Projected Replacement. The funds allocated to the account of the Projected Replacement are subtracted from the Replacement Cost. The result is then divided by the number of years until replacement, and the result is the annual funding for each of the Projected Replacements. The sum of these is \$95,301, the Component Method Recommended Annual Funding of Replacement Reserves in the Study Year (2010).

In our fence example, the \$207 in the account is subtracted from the \$1,000 Total Replacement Cost and divided by the 2 years that remain before replacement, resulting in an annual deposit of \$396. Next year, the deposit remains \$396, but in the third year, the fence is replaced and the annual funding adjusts to \$100.

- **Adjustment to the Component Method for interest and inflation.** The calculations in the Replacement Reserve Analysis do not account for interest earned on Replacement Reserves, the effects of inflation of the cost of Projected Replacements, or a constant annual increase in Annual Funding of Replacement Reserves.

Table #2. Component Method Data - Years 1 through 30

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Starting balance	\$140,058									
Annual deposit	\$95,301	\$88,224	\$73,205	\$73,031	\$67,630	\$67,630	\$58,019	\$57,907	\$56,629	\$53,280
Expenditures	\$12,434	\$50,688	\$880	\$53,367		\$134,710	\$1,199	\$28,800	\$83,760	\$78,798
Year end balance	\$222,925	\$260,461	\$332,786	\$352,449	\$420,079	\$352,999	\$409,820	\$438,927	\$411,796	\$386,277
Cumulative Expenditures	\$12,434	\$63,122	\$64,002	\$117,369	\$117,369	\$252,079	\$253,277	\$282,077	\$365,837	\$444,635
Cumulative Receipts	\$235,359	\$323,583	\$396,787	\$469,818	\$537,448	\$605,077	\$663,097	\$721,004	\$777,633	\$830,913
Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Annual deposit	\$52,026	\$51,463	\$51,432	\$51,379	\$51,379	\$51,379	\$51,120	\$51,102	\$49,906	\$49,874
Expenditures	\$34,758	\$53,188	\$1,199	\$17,140		\$48,904	\$2,875	\$70,096	\$14,489	\$42,364
Year end balance	\$403,545	\$401,820	\$452,054	\$486,292	\$537,671	\$540,146	\$588,391	\$569,397	\$604,815	\$612,324
Cumulative Expenditures	\$479,393	\$532,581	\$533,780	\$550,920	\$550,920	\$599,824	\$602,699	\$672,794	\$687,283	\$729,647
Cumulative Receipts	\$882,938	\$934,402	\$985,834	\$1,037,212	\$1,088,591	\$1,139,970	\$1,191,090	\$1,242,192	\$1,292,098	\$1,341,972
Year	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Annual deposit	\$49,751	\$49,751	\$49,699	\$49,596	\$49,596	\$49,575	\$49,575	\$49,569	\$49,536	\$49,536
Expenditures	\$44,985	\$62,592	\$16,850	\$39,715	\$19,277	\$106,135	\$4,900	\$35,654	\$70,660	\$52,214
Year end balance	\$617,090	\$604,248	\$637,097	\$646,978	\$677,298	\$620,738	\$665,413	\$679,327	\$658,203	\$655,525
Cumulative Expenditures	\$774,632	\$837,224	\$854,074	\$893,789	\$913,066	\$1,019,201	\$1,024,101	\$1,059,755	\$1,130,415	\$1,182,629
Cumulative Receipts	\$1,391,722	\$1,441,473	\$1,491,172	\$1,540,768	\$1,590,364	\$1,639,939	\$1,689,514	\$1,739,082	\$1,788,618	\$1,838,154

CURRENT FUNDING



\$30,000 CURRENT ANNUAL FUNDING OF REPLACEMENT RESERVES
 (as reported by the Association).

\$4.11 Per unit (average), reported current monthly funding of Replacement Reserves

General. Our evaluation of the Current Association Funding assumes that the Association will continue to fund Replacement Reserves at the current level of \$30,000 per year in each of the 30 years of the Study Period.

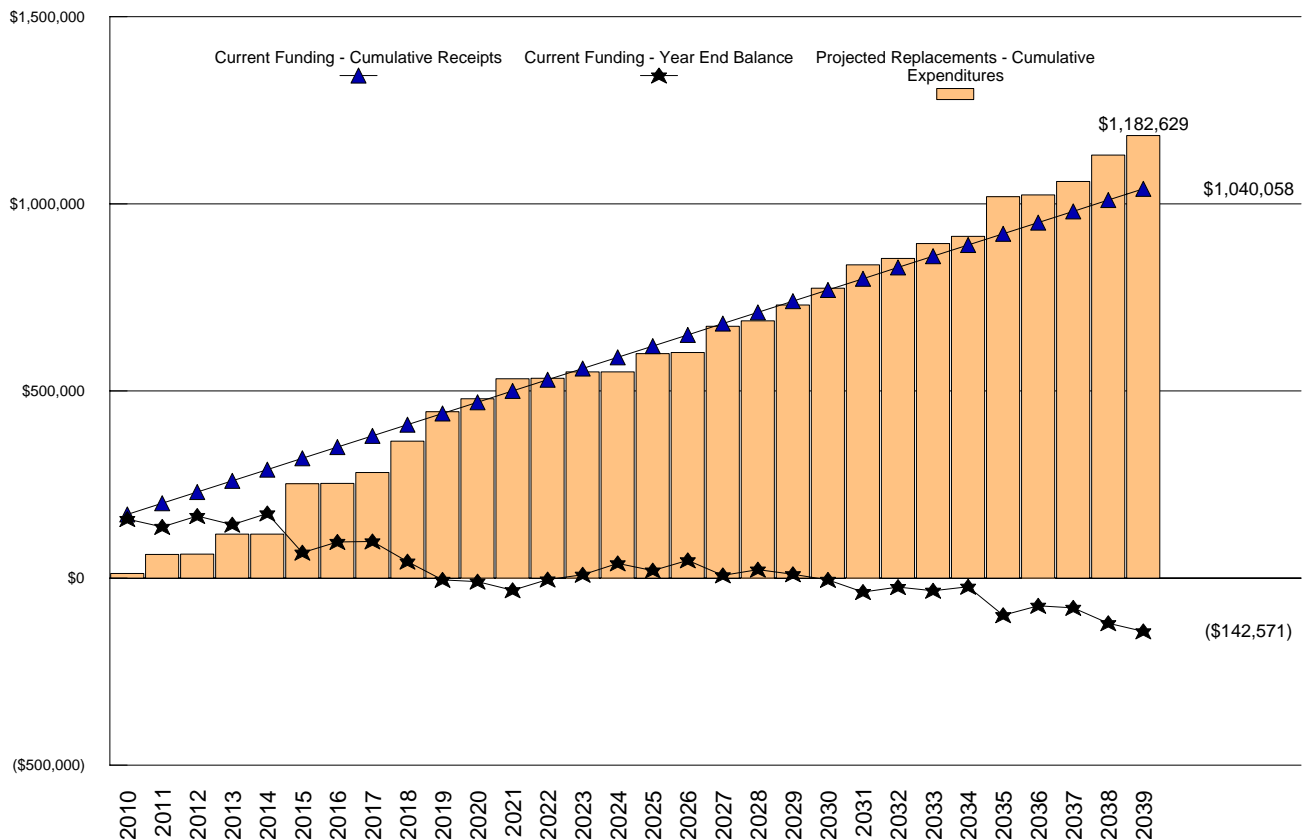
Our evaluation is based upon this Replacement Reserve Funding Level, a \$140,058 Beginning Balance, the Projected Annual Replacement Expenditures shown in Graph #1 and listed in the Replacement Reserve Inventory, and any interest, inflation rate, or constant annual increase in annual contribution adjustments discussed below.

- Evaluation. Our calculations have determined that Current Annual Funding of Replacement Reserves, as reported by the Association, is inadequate to fund Projected Replacement beginning in 2019.

The Current Annual Funding of Replacement Reserves results in insufficient funds to make Projected Replacements in 14 years of the 30-year Study Period, and a maximum shortfall of \$-142,571 occurs in 2039.

- Adjustment to the Current Association Funding for interest and inflation. The Calculations in the Replacement Reserve Analysis do not account for interest earned on Replacement Reserves, the effects of inflation of the cost of Projected Replacements, or a constant annual increase in Annual Funding of Replacement Reserves.
- Comparison of Current Association Funding and Average Annual Expenditure. The average annual expenditure for Projected Replacements listed in the Reserve Inventory over the 30-year Study Period is \$39,421 (see Graph #1). Current Association annual funding of Replacement Reserves is \$30,000, or approximately 76 percent of the Average Annual Expenditure.

Graph #5. Current Association Funding - Cumulative Receipts and Expenditures Graph



CURRENT FUNDING (cont'd)

Table #3. Current Funding Data - Years 1 through 30

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Starting balance	\$140,058									
Annual deposit	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Expenditures	\$12,434	\$50,688	\$880	\$53,367		\$134,710	\$1,199	\$28,800	\$83,760	\$78,798
Year end balance	\$157,625	\$136,937	\$166,057	\$142,690	\$172,690	\$67,980	\$96,781	\$97,981	\$44,221	(\$4,577)
Cumulative Expenditures	\$12,434	\$63,122	\$64,002	\$117,369	\$117,369	\$252,079	\$253,277	\$282,077	\$365,837	\$444,635
Cumulative Receipts	\$170,058	\$200,058	\$230,058	\$260,058	\$290,058	\$320,058	\$350,058	\$380,058	\$410,058	\$440,058
Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Annual deposit	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Expenditures	\$34,758	\$53,188	\$1,199	\$17,140		\$48,904	\$2,875	\$70,096	\$14,489	\$42,364
Year end balance	(\$9,335)	(\$32,523)	(\$3,722)	\$9,138	\$39,138	\$20,234	\$47,359	\$7,264	\$22,775	\$10,411
Cumulative expenditures	\$479,393	\$532,581	\$533,780	\$550,920	\$550,920	\$599,824	\$602,699	\$672,794	\$687,283	\$729,647
Cumulative receipts	\$470,058	\$500,058	\$530,058	\$560,058	\$590,058	\$620,058	\$650,058	\$680,058	\$710,058	\$740,058
Year	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Annual deposit	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Expenditures	\$44,985	\$62,592	\$16,850	\$39,715	\$19,277	\$106,135	\$4,900	\$35,654	\$70,660	\$52,214
Year end balance	(\$4,574)	(\$37,166)	(\$24,016)	(\$33,731)	(\$23,008)	(\$99,143)	(\$74,043)	(\$79,697)	(\$120,357)	(\$142,571)
Cumulative Expenditures	\$774,632	\$837,224	\$854,074	\$893,789	\$913,066	\$1,019,201	\$1,024,101	\$1,059,755	\$1,130,415	\$1,182,629
Cumulative Receipts	\$770,058	\$800,058	\$830,058	\$860,058	\$890,058	\$920,058	\$950,058	\$980,058	\$1,010,058	\$1,040,058

COMMENTS ON THE REPLACEMENT RESERVE ANALYSIS

- This Replacement Reserve Study has been developed in compliance with the Community Associations Institute, National Reserve Study Standards, for a Level Two - Update (with site visit and on-site review).
- Newington Common Areas has 609 units. The type of property is a community association.
- Our calculations assume that Replacement Reserves are not subject to tax.

Intentionally Left Blank

REPLACEMENT RESERVE INVENTORY GENERAL INFORMATION

Newington Common Areas - Replacement Reserve Inventory identifies 129 items. Two types of items are identified, Projected Replacements and Excluded Items:

- **PROJECTED REPLACEMENTS.** 86 of the items are Projected Replacements and the periodic replacements of these items are scheduled for funding from Replacement Reserves. The Projected Replacements have an estimated one-time replacement cost of \$1,030,540. Replacements totaling \$1,182,629 are scheduled in the Replacement Reserve Inventory over the 30-year Study Period.

Projected Replacements are the replacement of commonly owned physical assets that require periodic replacement and whose replacement is to be funded from Replacement Reserves.

- **EXCLUDED ITEMS.** 43 of the items are Excluded Items, and expenditures for these items are NOT scheduled for funding from Replacement Reserves. The accuracy of the calculations made in the Replacement Reserve Analysis is dependent on expenditures NOT being made for Excluded Items. The Excluded Items are listed in the Replacement Reserve Inventory to identify specific items and categories of items that are not to be funded from Replacement Reserves. There are multiple categories of items that are typically excluded from funding by Replacement Reserves, including but not limited to:

Tax Code. The United States Tax Code grants very favorable tax status to Replacement Reserves, conditioned on expenditures being made within certain guidelines. These guidelines typically exclude maintenance activities, partial replacements, repairs, capital improvements, and one-time only replacements.

Value. Items with a replacement cost of less than \$1,000 are typically excluded from funding from Replacement Reserves. This exclusion is made to accurately reflect how Replacement Reserves are administered. If the Association has selected an alternative level, it will be noted in the Replacement Reserve Inventory - General Comments on Page B2.

Long-lived Items. Items that when properly maintained, can be assumed to have a life equal to the property as a whole, are typically excluded from the Replacement Reserve Inventory.

Unit improvements. Items located on property owned by a single unit and where the items serve a single unit are generally assumed to be the responsibility of that unit, not the Association.

Other non-common improvements. Items owned by the local government, public and private utility companies, the United States Postal Service, Master Associations, state and local highway authorities, etc., may be installed on property that is owned by the Association. These types of items are generally not the responsibility of the Association and are excluded from the Replacement Reserve Inventory.

The rationale for the exclusion of an item from funding by Replacement Reserves is discussed in more detail in the 'Comments' section of its page of the Replacement Reserve Inventory.

- **CATEGORIES.** The 129 items included in the Newington Common Areas Replacement Reserve Inventory are divided into 11 major categories. Each category is printed on a separate page, Pages B3 to B13.
- **LEVEL OF SERVICE.** This Replacement Reserve Inventory has been developed in compliance with the standards established for a Level Two - Update (with site visit and on-site review), as defined by the National Reserve Study Standards, established in 1998 by Community Associations Institute, which states:

Level II Studies are based entirely on the component inventory from a prior study. This information is adjusted to reflect changes to the inventory that are provided by the property manager, and the quantities are adjusted accordingly from field measurement and/or quantity takeoffs from to-scale drawings that are made available to us. The condition of all components is ascertained from a site visit and the visual inspection of each component by the analyst. The life expectancy and the value of components are provided based in part on these observations and the fund status and funding plan are derived from analysis of this data.

REPLACEMENT RESERVE INVENTORY - GENERAL INFORMATION (cont'd)

- **INVENTORY DATA.** Each of the 86 Projected Replacements listed in the Replacement Reserve Inventory includes the following data:

Item Number. The Item Number is assigned sequentially and is intended for identification purposes only.

Item Description. We have named each item included in the Inventory. Where the name of the item and the category are not sufficient to specifically identify the item, we have included additional information in the Comments section at the bottom of the page.

Units. We have used standard abbreviations to identify the number of units including SF-square feet, FT-foot, SY-square yard, LS-lump sum, EA-each, and PR-pair. Nonstandard abbreviations are noted in the Comments section on the page on which the abbreviation is used.

Number of Units. The methods used to develop the quantities are discussed in "Level of Service" above.

Unit Replacement Cost. We use two sources to develop the unit cost data shown in the Inventory; industry standard estimating manuals published by R. S. Means Company, Inc., and data that we have developed based upon our experience with similar replacement projects. We frequently use our best professional judgment to modify these values to reflect conditions at the site that we believe will affect the unit costs. Actual Replacement Costs may vary substantially from our estimates because of unforeseen demolition costs, engineering and architectural fees, timing of the replacement, etc.

Normal Economic Life (Yrs). The number of years that a new and properly installed item should be expected to remain in service.

Economic Life Remaining (Yrs). The estimated number of years before an item will need to be replaced. In "normal" conditions, this could be calculated by subtracting the age of the item from the Normal Economic Life of the item, but only rarely do physical assets age "normally". Some items may have longer or shorter lives depending on many factors such as environment, initial quality of the item, maintenance, etc.

Total Replacement Cost. This is calculated by multiplying the Unit Replacement Cost by the Number of Units.

Each of the 43 Excluded Items includes the Item Description, Units, and Number of Units. Many of the Excluded Items are listed as a 'Lump Sum' with a quantity of 1. For the Excluded Items, this indicates that all of the items identified by the 'Item Description' are excluded from funding by Replacement Reserves.

- **REVIEW OF EXPENDITURES.** All expenditures from Replacement Reserves should be made only after consultation with an accounting professional.
- **PARTIAL FUNDING.** Items may have been included in the Replacement Reserve Inventory at less than 100 percent of their full quantity and/or replacement cost. This is done on items that will never be replaced in their entirety, but which may require periodic replacements over an extended period of time. The assumptions that provide the basis for any partial funding are noted on in the Comments section.

SITE IMPROVEMENTS							
PROJECTED REPLACEMENTS							
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
1	Asphalt Parking Lot Resurface	sy	5,500	\$12.60	20	5	\$69,300
2	Parking Lot - Seal Coat	sy	5,500	\$1.80	5	none	\$9,900
3	Asphalt Paths 30%	sf	12,672	\$4.00	10	1	\$50,688
4	Entrance Gate	ea	1	\$7,700.00	35	22	\$7,700
5	Brick Ent. Monuments - Pointing 10%	sf	130	\$12.50	10	5	\$1,625
6	Wood Retaining Wall @ Kitchner	sf	70	\$32.00	20	3	\$2,240
7	Concrete Bl. Retaining Wall @ Matisse	sf	925	\$40.00	40	17	\$37,000
8	Metal Rail at Retaining Wall	lf	185	\$55.00	40	17	\$10,175
9	Split Rail Fence at Moline	lf	185	\$15.00	15	9	\$2,775
SITE IMPROVEMENTS - Replacement Costs - Subtotal							\$191,403

SITE IMPROVEMENTS
COMMENTS

CONCRETE COMPONENTS
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
10	Concrete sidewalk (6%)	sf	141	\$8.50	60	none	\$1,199
11	Concrete sidewalk (6%)	sf	141	\$8.50	60	6	\$1,199
12	Concrete sidewalk (6%)	sf	141	\$8.50	60	12	\$1,199
13	Concrete sidewalk (6%)	sf	141	\$8.50	60	18	\$1,199
14	Concrete sidewalk (6%)	sf	141	\$8.50	60	24	\$1,199
15	Concrete sidewalk (6%)	sf	141	\$8.50	60	30	\$1,199
16	Concrete sidewalk (6%)	sf	141	\$8.50	60	36	\$1,199
17	Concrete sidewalk (6%)	sf	141	\$8.50	60	42	\$1,199
18	Concrete sidewalk (6%)	sf	141	\$8.50	60	48	\$1,199
19	Concrete sidewalk (6%)	sf	141	\$8.50	60	54	\$1,199
20	Concrete curb & gutter (6%)	ft	68	\$34.00	60	3	\$2,312
21	Concrete curb & gutter (6%)	ft	68	\$34.00	60	9	\$2,312
22	Concrete curb & gutter (6%)	ft	68	\$34.00	60	15	\$2,312
23	Concrete curb & gutter (6%)	ft	68	\$34.00	60	21	\$2,312
24	Concrete curb & gutter (6%)	ft	68	\$34.00	60	27	\$2,312
25	Concrete curb & gutter (6%)	ft	68	\$34.00	60	33	\$2,312
26	Concrete curb & gutter (6%)	ft	68	\$34.00	60	39	\$2,312
27	Concrete curb & gutter (6%)	ft	68	\$34.00	60	45	\$2,312
28	Concrete curb & gutter (6%)	ft	68	\$34.00	60	51	\$2,312
29	Concrete curb & gutter (6%)	ft	68	\$34.00	60	57	\$2,312

CONCRETE COMPONENTS - Replacement Costs - Subtotal \$35,105

CONCRETE COMPONENTS
COMMENTS

Empty box for comments.

CLUBHOUSE
 PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
30	Roof Shingles	sf	1,815	\$5.50	25	17	\$9,983
31	Gutter and Downspouts	lf	105	\$6.00	25	17	\$630
32	Vinyl Siding	sf	850	\$4.00	25	22	\$3,400
33	Brick Pointing 10%	sf	150	\$12.50	10	5	\$1,875
34	Windows	sf	75	\$32.00	30	26	\$2,400
35	Doors Metal	ea	11	\$650.00	35	15	\$7,150
36	Doors Wood	ea	1	\$550.00	25	21	\$550
37	Stair Metal Frame, Wood Thread	ea	1	\$2,875.00	20	16	\$2,875
38	Exterior Lights	ea	9	\$140.00	20	5	\$1,260
39	Office Carpet	sf	640	\$4.45	7	3	\$2,848
40	Meeting Room Carpet	sf	300	\$4.45	10	none	\$1,335
41	Restroom and Shower Restoration	ea	2	\$5,000.00	30	19	\$10,000
42	Interior Lights	ea	10	\$125.00	30	22	\$1,250
43	HVAC	ls	1	\$2,500.00	15	11	\$2,500
44	Water Heater	ea	1	\$1,380.00	20	17	\$1,380

CLUBHOUSE - Replacement Costs - Subtotal \$49,436

CLUBHOUSE
 COMMENTS

Empty area for comments.

**SWIMMING POOL
 PROJECTED REPLACEMENTS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
45	MP - Structure	sf	6,664	\$65.00	65	30	\$433,160
46	MP - White Coat	sf	8,686	\$3.45	10	9	\$29,967
47	MP - Coping Tile	lf	397	\$50.00	20	9	\$19,850
48	MP - Waterline Tile	lf	397	\$15.00	15	9	\$5,955
49	MP - Pump 15 HP	ea	1	\$6,000.00	10	7	\$6,000
50	MP - Filters	ea	1	\$13,000.00	20	10	\$13,000
51	WP - Structure	sf	595	\$65.00	65	30	\$38,675
52	WP - White Coat	sf	695	\$3.45	10	9	\$2,398
53	WP - Coping Tile	lf	100	\$50.00	15	9	\$5,000
54	Wp - Waterline Tile	lf	100	\$15.00	15	9	\$1,500
55	WP - Pump	ea	1	\$2,000.00	10	5	\$2,000
56	WP - Filters	ea	1	\$2,500.00	20	10	\$2,500
57	Pool Concrete Deck 10%	sf	822	\$11.00	6	3	\$9,042
58	Pool Lights 10'	ea	8	\$1,500.00	30	8	\$12,000
59	Pool Chain Link Fence 10'	lf	550	\$24.00	20	7	\$13,200
60	Pool Chain Link Fence 3' 6"	lf	260	\$15.00	20	7	\$3,900
61	Pool Furniture	ls	1	\$13,000.00	10	5	\$13,000
62	Pool Life Guard Stands	ea	3	\$1,725.00	15	10	\$5,175
63	Pool Diving Boards and Stand	ea	1	\$2,500.00	20	3	\$2,500
SWIMMING POOL - Replacement Costs - Subtotal							\$618,821

**SWIMMING POOL
 COMMENTS**

- We have assumed that the project to replace the pool deck will include the replacement of the plumbing and electrical systems installed beneath the pavement.

TENNIS COURTS and BALLFIELD
 PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
64	Tennis Court Replace Surface	ea	2	\$20,500.00	20	8	\$41,000
65	Tennis Court Color Coat	ea	2	\$5,500.00	5	3	\$11,000
66	Tennis Court Net	ea	2	\$870.00	5	3	\$1,740
67	Tennis Court Net Posts/Footings	ea	2	\$2,700.00	20	8	\$5,400
68	Tennis Court Fence Chain Link 10'	lf	480	\$24.00	20	8	\$11,520
69	Ballfield Backstop	ls	1	\$4,360.00	20	3	\$4,360
70	Ballfield Chain Link Fence 4'	lf	825	\$15.00	20	3	\$12,375
71	Ballfield Wood Bench	ea	2	\$440.00	15	2	\$880

TENNIS COURTS and BALLFIELD - Replacement Costs - Subtotal \$88,275

TENNIS COURTS and BALLFIELD
 COMMENTS

Empty comment box for additional notes.

TOT LOTS

PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
72	TL #1 Durer Equipment	ls	1	\$10,000.00	15	5	\$10,000
73	TL #1 Durer Borders	lf	130	\$10.00	10	3	\$1,300
74	TL #1 Durer Benches	ea	1	\$550.00	15	3	\$550
75	TL #2 Marconi Equipment	ls	1	\$7,000.00	15	5	\$7,000
76	TL #2 Marconi Borders	lf	180	\$10.00	10	3	\$1,800
77	TL #2 Marconi Benches	ea	1	\$550.00	15	5	\$550
78	TL #3 Brandeis Equipment	ls	1	\$7,000.00	15	5	\$7,000
79	TL #3 Brandeis Borders	lf	130	\$10.00	10	3	\$1,300
80	TL #3 Brandeis Benches	ea	2	\$550.00	15	5	\$1,100
81	TL #5 Getty Equipment	ls	1	\$7,000.00	15	5	\$7,000
82	TL #5 Getty Borders	lf	200	\$10.00	10	5	\$2,000
83	TL #5 Getty Benches	ea	2	\$550.00	15	8	\$1,100
84	TL #6 Luce Equipment	ls	1	\$4,500.00	15	7	\$4,500
85	TL #6 Luce Borders	lf	120	\$10.00	10	7	\$1,200
86	TL #6 Luce Benches	ea	2	\$550.00	15	5	\$1,100
TOT LOTS - Replacement Costs - Subtotal							\$47,500

TOT LOTS

COMMENTS

- Tot lots and tot lot equipment should be evaluated annually by a playground safety specialist for compliance with the Consumer Product Safety Commission, Handbook for Public Playground Safety. Defects should be corrected immediately to protect the users of the facilities from potential injury and the Association from potential liability for those injuries.

VALUATION EXCLUSIONS

EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Miscellaneous signage	ls	1				EXCLUDED

VALUATION EXCLUSIONS

COMMENTS

- Valuation Exclusions. For ease of administration of the Replacement Reserves and to reflect accurately how Replacement Reserves are administered, items with a dollar value less than \$1,000.00 have not been scheduled for funding from Replacement Reserves. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.

- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

LONG-LIFE EXCLUSIONS

EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Building foundation(s)	ls	1				EXCLUDED
	Concrete floor slabs (interior)	ls	1				EXCLUDED
	Wall, floor, & roof structure	ls	1				EXCLUDED
	Exterior brick veneer	ls	1				EXCLUDED
	Fire protection/security systems	ls	1				EXCLUDED
	Common element electrical services	ls	1				EXCLUDED
	Electrical wiring	ls	1				EXCLUDED
	Water piping at common facilities	ls	1				EXCLUDED
	Waste piping at common facilities	ls	1				EXCLUDED

LONG-LIFE EXCLUSIONS

COMMENTS

- Long Life Exclusions. Components that when properly maintained, can be assumed to have a life equal to the property as a whole, are normally excluded from the Replacement Reserve Inventory. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- Exterior masonry is generally assumed to have an unlimited economic life but periodic repointing is required and we have included this for funding in the Replacement Reserve Inventory.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

UNIT IMPROVEMENTS EXCLUSIONS

EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Domestic water pipes serving one unit	ls	1				EXCLUDED
	Sanitary sewers serving one unit	ls	1				EXCLUDED
	Electrical wiring serving one unit	ls	1				EXCLUDED
	Cable TV service serving one unit	ls	1				EXCLUDED
	Telephone service serving one unit	ls	1				EXCLUDED
	Gas service serving one unit	ls	1				EXCLUDED
	Driveway on an individual lot	ls	1				EXCLUDED
	Apron on an individual lot	ls	1				EXCLUDED
	Sidewalk on an individual lot	ls	1				EXCLUDED
	Stairs on an individual lot	ls	1				EXCLUDED
	Curb & gutter on an individual lot	ls	1				EXCLUDED
	Retaining wall on an individual lot	ls	1				EXCLUDED
	Fence on an individual lot	ls	1				EXCLUDED
	Unit exterior	ls	1				EXCLUDED

UNIT IMPROVEMENTS EXCLUSIONS

COMMENTS

- Unit improvement Exclusions. We understand that the elements of the project that relate to a single unit are the responsibility of that unit owner. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

UTILITY EXCLUSIONS

EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Primary electric feeds	ls	1				EXCLUDED
	Electric transformers	ls	1				EXCLUDED
	Cable TV systems and structures	ls	1				EXCLUDED
	Telephone cables and structures	ls	1				EXCLUDED
	Site lighting	ls	1				EXCLUDED
	Gas mains and meters	ls	1				EXCLUDED
	Water mains and meters	ls	1				EXCLUDED
	Sanitary sewers	ls	1				EXCLUDED
	Stormwater management system	ls	1				EXCLUDED

UTILITY EXCLUSIONS

COMMENTS

- Utility Exclusions. Many improvements owned by utility companies are on property owned by the Association. We have assumed that repair, maintenance, and replacements of these components will be done at the expense of the appropriate utility company. Examples of items excluded from funding Replacement Reserves by this standard are listed above.

- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

MAINTENANCE AND REPAIR EXCLUSIONS

EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Cleaning of asphalt pavement	ls	1				EXCLUDED
	Crack sealing of asphalt pavement	ls	1				EXCLUDED
	Painting of curbs	ls	1				EXCLUDED
	Landscaping and site grading	ls	1				EXCLUDED
	Exterior painting	ls	1				EXCLUDED
	Interior painting	ls	1				EXCLUDED
	Janitorial service	ls	1				EXCLUDED
	Repair services	ls	1				EXCLUDED
	Partial replacements	ls	1				EXCLUDED
	Capital improvements	ls	1				EXCLUDED

MAINTENANCE AND REPAIR EXCLUSIONS

COMMENTS

- Maintenance activities, one-time-only repairs, and capital improvements. These activities are NOT appropriately funded from Replacement Reserves. The inclusion of such component in the Replacement Reserve Inventory could jeopardize the special tax status of ALL Replacement Reserves, exposing the Association to significant tax liabilities. We recommend that the Board of Directors discuss these exclusions and Revenue Ruling 75-370 with a Certified Public Accountant.
- Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

Intentionally Left Blank

PROJECTED ANNUAL REPLACEMENTS GENERAL INFORMATION

CALENDAR OF ANNUAL REPLACEMENTS. The 86 Projected Replacements in the Newington Common Areas Replacement Reserve Inventory whose replacement is scheduled to be funded from Replacement Reserves are broken down on a year-by-year basis, beginning on Page C2.

REPLACEMENT RESERVE ANALYSIS AND INVENTORY POLICES, PROCEDURES, AND ADMINISTRATION

- **REVISIONS.** Revisions will be made to the Replacement Reserve Analysis and Replacement Reserve Inventory in accordance with the written instructions of the Board of Directors. No additional charge is incurred for the first revision, if requested in writing within three months of the date of the Replacement Reserve Study. It is our policy to provide revisions in electronic (Adobe PDF) format only.
- **CONFLICT OF INTEREST.** Neither Miller - Dodson Associates nor the Reserve Analyst has any prior or existing relationship with this Association which would represent a real or perceived conflict of interest.
- **RELIANCE ON DATA PROVIDED BY THE CLIENT.** Information provided by an official representative of the Association regarding financial, physical conditions, quality, or historical issues is deemed reliable.
- **INTENT.** This Replacement Reserve Study is a reflection of the information provided by the Association and the visual evaluations of the Analyst. It has been prepared for the sole use of the Association and is not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.
- **PREVIOUS REPLACEMENTS.** Information provided to Miller - Dodson Associates regarding prior replacements is considered to be accurate and reliable. Our visual evaluation is not a project audit or quality inspection.
- **UPDATING.** In the first two or possibly three years after the completion of a Level One Replacement Reserve Study, we recommend the Association review and revise the Replacement Reserve Analysis and Inventory annually to take into account replacements which have occurred and known changes in replacement costs. This can frequently be handled as a Level Two or Level Three Study (as defined by the Community Associations Institute), unless the Association has completed major replacement projects. A full analysis (Level One) based on a comprehensive visual evaluation of the site should be accomplished every three to five years or after each major replacement project.
- **EXPERIENCE WITH FUTURE REPLACEMENTS.** The Calendar of Annual Projected Replacements, lists replacements we have projected to occur over the next thirty years, begins on Page C2. Actual experience in replacing the items may differ significantly from the cost estimates and time frames shown because of conditions beyond our control. These differences may be caused by maintenance practices, inflation, variations in pricing and market conditions, future technological developments, regulatory actions, acts of God, and luck. Some items may function normally during our visual evaluation and then fail without notice.
- **REVIEW OF THE REPLACEMENT RESERVE STUDY.** For this study to be effective, it should be reviewed by the Newington Common Areas Board of Directors, those responsible for the management of the items included in the Replacement Reserve Inventory, and the accounting professionals employed by the Association.

PROJECTED REPLACEMENTS - YEARS 1 TO 6

2010			2011			2012		
Item		\$	Item		\$	Item		\$
2	Parking Lot - Seal Coat	\$9,900	3	Asphalt Paths 30%	\$50,688	71	Ballfield Wood Bench	\$880
10	Concrete sidewalk (6%)	\$1,199						
40	Meeting Room Carpet	\$1,335						
Total Scheduled Replacements		\$12,434	Total Scheduled Replacements		\$50,688	Total Scheduled Replacements		\$880
2013			2014			2015		
Item		\$	Item		\$	Item		\$
6	Wood Retaining Wall @ Kitc	\$2,240				1	Asphalt Parking Lot Resurfa	\$69,300
20	Concrete curb & gutter (6%)	\$2,312				2	Parking Lot - Seal Coat	\$9,900
39	Office Carpet	\$2,848				5	Brick Ent. Monuments - Poir	\$1,625
57	Pool Concrete Deck 10%	\$9,042				33	Brick Pointing 10%	\$1,875
63	Pool Diving Boards and Star	\$2,500				38	Exterior Lights	\$1,260
65	Tennis Court Color Coat	\$11,000				55	WP - Pump	\$2,000
66	Tennis Court Net	\$1,740				61	Pool Furniture	\$13,000
69	Ballfield Backstop	\$4,360				72	TL #1 Durer Equipment	\$10,000
70	Ballfield Chain Link Fence 4	\$12,375				75	TL #2 Marconi Equipment	\$7,000
73	TL #1 Durer Borders	\$1,300				77	TL #2 Marconi Benches	\$550
74	TL #1 Durer Benches	\$550				78	TL #3 Brandeis Equipment	\$7,000
76	TL #2 Marconi Borders	\$1,800				80	TL #3 Brandeis Benches	\$1,100
79	TL #3 Brandeis Borders	\$1,300				81	TL #5 Getty Equipment	\$7,000
						82	TL #5 Getty Borders	\$2,000
						86	TL #6 Luce Benches	\$1,100
Total Scheduled Replacements		\$53,367	No Scheduled Replacements			Total Scheduled Replacements		\$134,710

PROJECTED REPLACEMENTS - YEARS 7 TO 12

2016			2017			2018		
Item		\$	Item		\$	Item		\$
11	Concrete sidewalk (6%)	\$1,199	49	MP - Pump 15 HP	\$6,000	58	Pool Lights 10'	\$12,000
			59	Pool Chain Link Fence 10'	\$13,200	64	Tennis Court Replace Surfa	\$41,000
			60	Pool Chain Link Fence 3' 6"	\$3,900	65	Tennis Court Color Coat	\$11,000
			84	TL #6 Luce Equipment	\$4,500	66	Tennis Court Net	\$1,740
			85	TL #6 Luce Borders	\$1,200	67	Tennis Court Net Posts/Fool	\$5,400
						68	Tennis Court Fence Chain L	\$11,520
						83	TL #5 Getty Benches	\$1,100
Total Scheduled Replacements		\$1,199	Total Scheduled Replacements		\$28,800	Total Scheduled Replacements		\$83,760
2019			2020			2021		
Item		\$	Item		\$	Item		\$
9	Split Rail Fence at Moline	\$2,775	2	Parking Lot - Seal Coat	\$9,900	3	Asphalt Paths 30%	\$50,688
21	Concrete curb & gutter (6%)	\$2,312	39	Office Carpet	\$2,848	43	HVAC	\$2,500
46	MP - White Coat	\$29,967	40	Meeting Room Carpet	\$1,335			
47	MP - Coping Tile	\$19,850	50	MP - Filters	\$13,000			
48	MP - Waterline Tile	\$5,955	56	WP - Filters	\$2,500			
52	WP - White Coat	\$2,398	62	Pool Life Guard Stands	\$5,175			
53	WP - Coping Tile	\$5,000						
54	Wp - Waterline Tile	\$1,500						
57	Pool Concrete Deck 10%	\$9,042						
Total Scheduled Replacements		\$78,798	Total Scheduled Replacements		\$34,758	Total Scheduled Replacements		\$53,188

PROJECTED REPLACEMENTS - YEARS 13 TO 18

2022			2023			2024			
Item		\$	Item		\$	Item		\$	
12	Concrete sidewalk (6%)	\$1,199	65	Tennis Court Color Coat	\$11,000				
			66	Tennis Court Net	\$1,740				
			73	TL #1 Durer Borders	\$1,300				
			76	TL #2 Marconi Borders	\$1,800				
			79	TL #3 Brandeis Borders	\$1,300				
Total Scheduled Replacements		\$1,199	Total Scheduled Replacements		\$17,140	No Scheduled Replacements			
2025			2026			2027			
Item		\$	Item		\$	Item		\$	
2	Parking Lot - Seal Coat	\$9,900	37	Stair Metal Frame, Wood Th	\$2,875	7	Concrete Bl. Retaining Wall	\$37,000	
5	Brick Ent. Monuments - Poir	\$1,625				8	Metal Rail at Retaining Wall	\$10,175	
22	Concrete curb & gutter (6%)	\$2,312				30	Roof Shingles	\$9,983	
33	Brick Pointing 10%	\$1,875				31	Gutter and Downspouts	\$630	
35	Doors Metal	\$7,150				39	Office Carpet	\$2,848	
55	WP - Pump	\$2,000				44	Water Heater	\$1,380	
57	Pool Concrete Deck 10%	\$9,042				49	MP - Pump 15 HP	\$6,000	
61	Pool Furniture	\$13,000				71	Ballfield Wood Bench	\$880	
82	TL #5 Getty Borders	\$2,000				85	TL #6 Luce Borders	\$1,200	
Total Scheduled Replacements		\$48,904	Total Scheduled Replacements		\$2,875	Total Scheduled Replacements			\$70,096

EXECUTIVE SUMMARY

The Newington TH Streets Replacement Reserve Inventory identifies 44 Projected Replacements for funding from Replacement Reserves, with an estimated one-time replacement cost of \$2,412,653.

The Replacement Reserve Analysis calculates recommended funding of Replacement Reserves by the two generally accepted methods, the Cash Flow Method and the Component Method. The Analysis also evaluates current funding of Replacement Reserves, as reported by the Association. The calculations and evaluation are summarized below:

\$224,744 CASH FLOW METHOD MINIMUM ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2010.

\$35.74 Per unit (average), minimum monthly funding of Replacement Reserves

The Cash Flow Method (CFM) calculates Minimum Annual Funding of Replacement Reserves that will fund Projected Replacements identified in the Replacement Reserve Inventory from a common pool of Replacement Reserves and prevent Replacement Reserves from dropping below a Minimum Recommended Balance.

CFM - Minimum Annual Funding remains the same between peaks in cumulative expenditures called Peak Years.

The first Peak Year occurs in 2015 and the CFM - Minimum Annual Funding of Replacement Reserves in 2016 declines to \$90,786 (\$14.44 per unit, per month), after the completion of \$1,554,426 of replacements in 2010 to 2015.

A subsequent Peak Year and decline in the Cash Flow Method, Minimum Annual Funding, occurs in 2035.

\$421,047 COMPONENT METHOD RECOMMENDED ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2010.

\$66.96 Per unit (average), recommended monthly funding of Replacement Reserves

The Component Method is a time tested and very conservative funding model developed by HUD in the early 1980's.

The Component Method treats each projected replacement in the Replacement Reserve Inventory as a separate account. Deposits are made to each individual account, where funds are held for exclusive use by that item.

Based on this funding model, the Association has a Current Funding Objective of \$1,579,651.

The Association reports having \$326,594 on deposit, which is 20.7% funded.

\$50,010 CURRENT ANNUAL FUNDING OF REPLACEMENT RESERVES (as reported by the Association).

\$7.95 Per unit (average), reported current monthly funding of Replacement Reserves

The evaluation of Current Funding, as reported by the Association, has calculated that if the Association continues to fund Replacement Reserves at the current level, there will NOT be adequate funds for Projected Replacements in 28 years of the 30-year Study Period, and a maximum shortfall of \$-1,743,296 occurs in 2035.

Pages A2 and A3 explain the Study Year, Study Period, Adjustments (interest & inflation), Beginning Balance, and Projected Replacements. Pages A4 to A9 explain in more detail the calculations associated with the Cash Flow Method, Component Method, and Current Funding.

REPLACEMENT RESERVE STATUS AND FUNDING PLAN

Current funding of Replacement Reserves is inadequate to fund Projected Replacements.

We recommend the Association adopt a Replacement Reserve Funding Plan based on the Cash Flow Method or the Component Method, to ensure that adequate funding is available throughout the 30-Year Study Period for the \$3,408,536 of Projected Replacements listed in the Newington TH Streets Replacement Reserve Inventory.

The Funding Plan should be professionally evaluated every three to five years or after completion of each major replacement project. The Board of Directors has a fiduciary responsibility to review the Funding Plan annually and should consider annual increases in Replacement Reserve funding at least equal to the Consumer Price Index.

REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Newton TH Streets Replacement Reserve Analysis calculations of recommended funding of Replacement Reserves by the Cash Flow Method and the Component Method, and the evaluation of the Current Funding, are based upon the same General Information; including the Study Year, Study Period, Adjustments (for interest, inflation, and/or a constant increase in annual funding), Beginning Balance, and Projected Replacements:

STUDY YEAR

The Association reports that their accounting year begins on January 1, and the Study Year, the first year evaluated by the Replacement Reserve Analysis, begins on January 1, 2010.

STUDY PERIOD

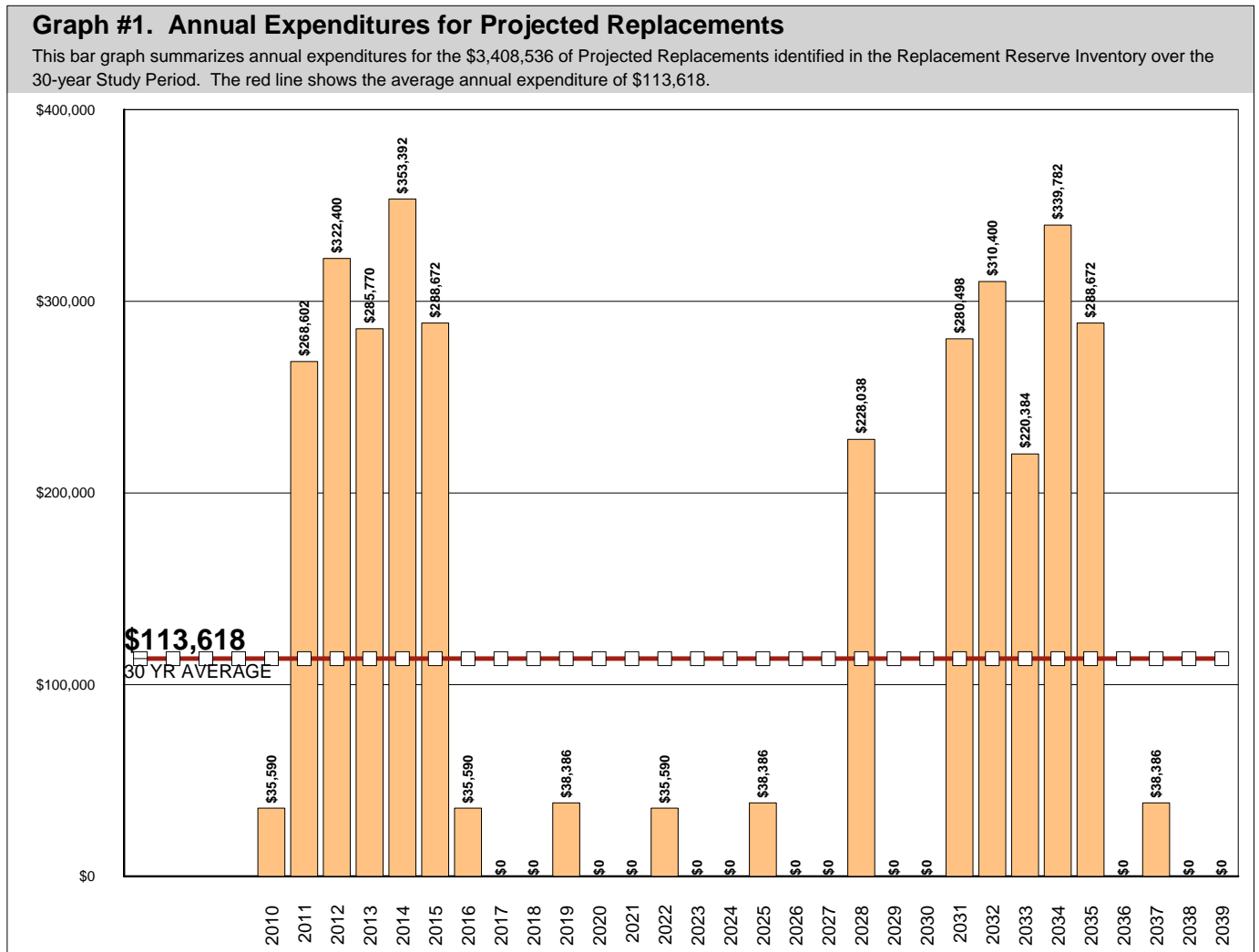
The Replacement Reserve Analysis evaluates the funding of Replacement Reserves over a 30-year Study Period that begins on January 1, 2010.

ADJUSTMENTS

The calculations in this Replacement Reserve Analysis do not account for interest earned on Replacement Reserves, the effects of inflation on the costs of Projected Replacements, or a constant annual increase in Annual Funding of Replacement Reserves. If requested, we will provide a Replacement Reserve Analysis with adjustments for inflation, interest, and/or a constant annual increase in funding, using values provided by the Association.

BEGINNING BALANCE

The Association reports Replacement Reserves on Deposit totaling \$326,594 at the start of the Study Year.



PROJECTED REPLACEMENTS

The Newington TH Streets Replacement Reserve Inventory (Section B) identifies 44 Projected Replacements with a one-time Replacement Cost of \$2,412,653 and replacements totaling \$3,408,536 over the 30-year Study Period. Projected Replacements are the replacement of commonly-owned items that:

- require periodic replacement and
- whose replacement is to be funded from Replacement Reserves.

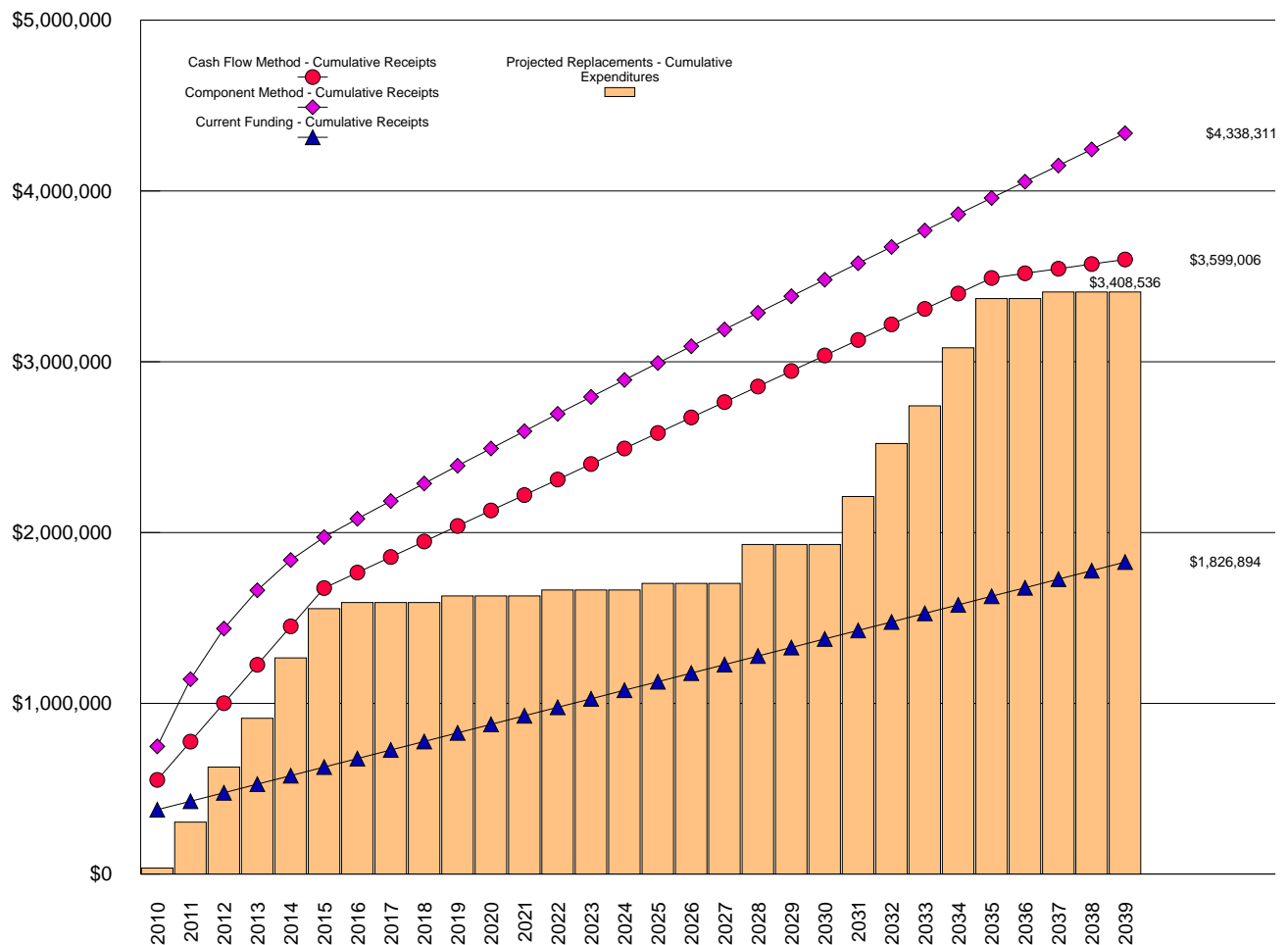
Expenditures from Replacements Reserves should be made only after consultation with an accounting professional.

The Section B - Replacement Reserve Inventory, contains Tables that list each Projected Replacement (and any Excluded Items) broken down into 5 major categories (Pages B3 to B6). Tables are also included that list each Projected Replacement by year for each of the 30 years of the Study Period beginning on Page C1.

The accuracy of this Replacement Reserve Analysis is dependent upon expenditures from Replacement Reserves being made only for the Projected Replacements specifically listed in the Replacement Reserve Inventory.

Graph #2. Comparison of Cumulative Replacement Reserve Funding and Expenditures

The line graph shows Replacement Reserves - Cumulative Receipts over the 30-year Study Period by the Cash Flow Method (red circles), Component Method (purple diamonds), and the Current Funding Plan as reported by the Association (blue triangles). The bar graph shows the Cumulative Expenditures necessary to fund the Project Replacements listed in the Replacement Reserve Inventory (Section B) and summarized in Graph #1.



CASH FLOW METHOD



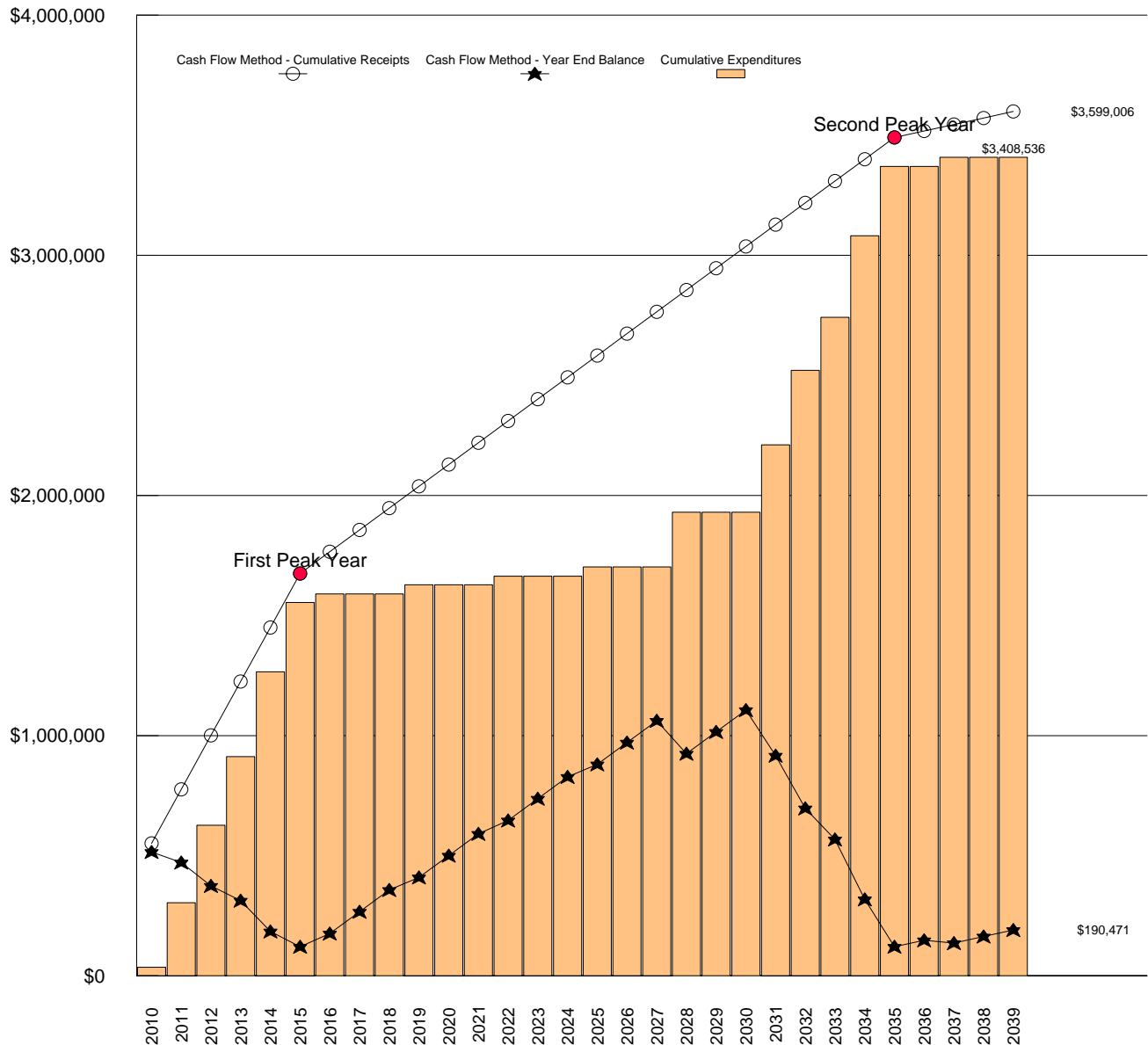
\$224,744 CASH FLOW METHOD MINIMUM ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2010.

\$35.74 Per unit (average), minimum monthly funding of Replacement Reserves

General. The Cash Flow Method is founded on the concept that the Replacement Reserve Account is solvent if cumulative receipts always exceed cumulative expenses. The Cash Flow Method calculates a MINIMUM annual deposit to Replacement Reserves that will:

- Fund all Projected Replacements listed in the Replacement Reserve Inventory (see Section B)
- Prevent Replacement Reserves from dropping below the Minimum Recommended Balance (see Page A-5)
- Allow a constant annual funding level between peaks in cumulative expenditures

Graph #3. Cash Flow Method - Cumulative Receipts and Expenditures Graph



COMPONENT METHOD



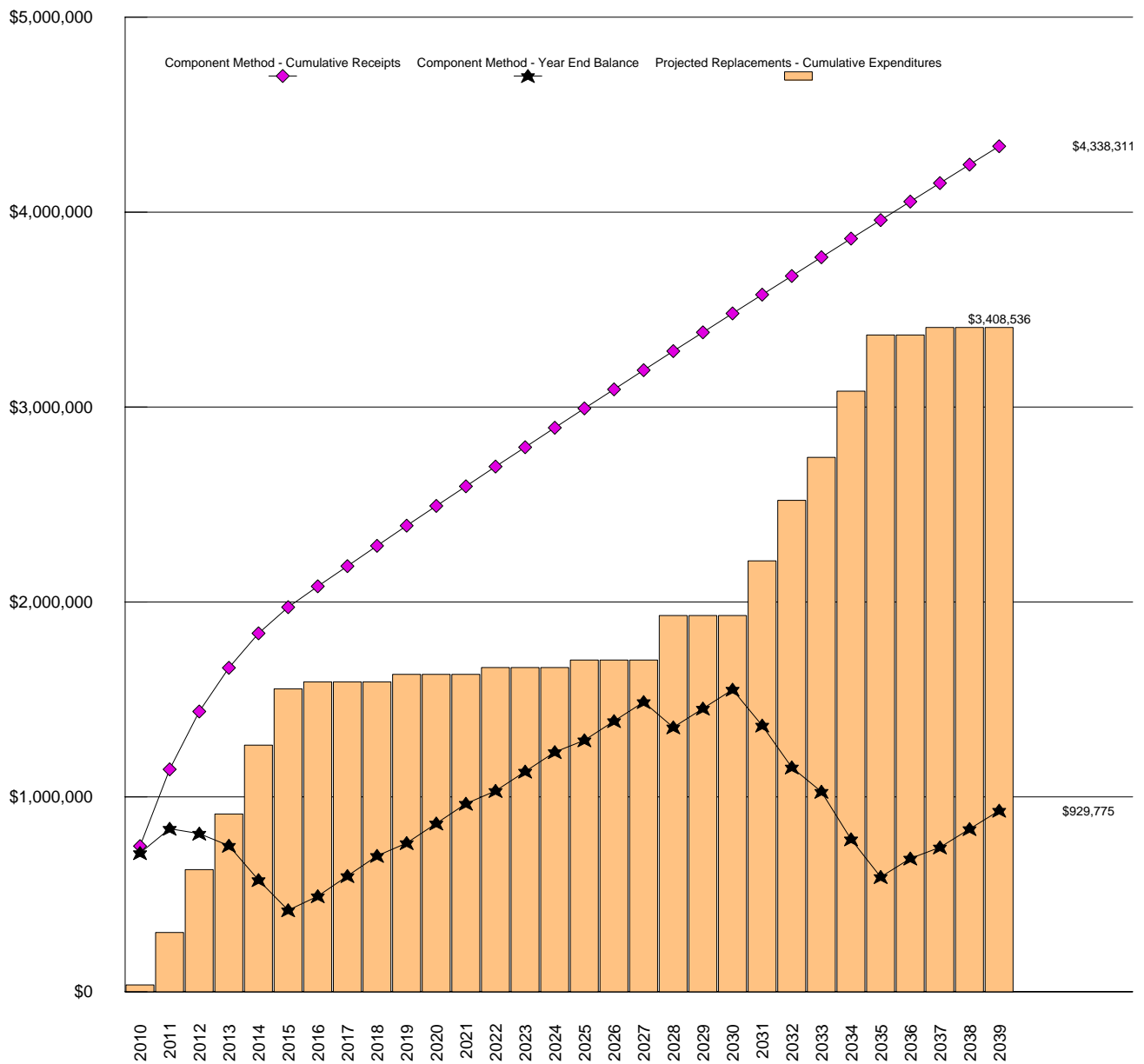
\$421,047

COMPONENT METHOD RECOMMENDED ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2010.

\$66.96 Per unit (average), recommended monthly funding of Replacement Reserves

General. The Component Method is a time tested and very conservative mathematical model developed by HUD in the early 1980s. Each of the 44 Projected Replacements listed in the Replacement Reserve Inventory is treated as a separate account. The Beginning Balance is allocated to each of these individual accounts, as is all subsequent funding of Replacement Reserves. These funds are "locked" in these individual accounts and are not available to fund other Projected Replacements. The calculation of the Recommended Annual Funding of Replacement Reserves is a multi-step process outlined in more detail on Page A7.

Graph #4. Component Method - Cumulative Receipts and Expenditures Graph



COMPONENT METHOD (cont'd)

- **Current Funding Objective.** A Current Funding Objective is calculated for each of the Projected Replacements listed in the Replacement Reserve Inventory. Replacement Cost is divided by the Normal Economic Life to determine the nominal annual contribution. The Remaining Economic Life is then subtracted from the Normal Economic Life to calculate the number of years that the nominal annual contribution should have been made. The two values are then multiplied to determine the Current Funding Objective. This is repeated for each of the 44 Projected Replacements. The total, \$1,579,651, is the Current Funding Objective.

For an example, consider a very simple Replacement Reserve Inventory with one Projected Replacement, a fence with a \$1,000 Replacement Cost, a Normal Economic Life of 10 years, and a Remaining Economic Life of 2 years. A contribution to Replacement Reserves of \$100 (\$1,000 + 10 years) should have been made in each of the previous 8 years (10 years - 2 years). The result is a Current Funding Objective of \$800 (8 years x \$100 per year).

- **Funding Percentage.** The Funding Percentage is calculated by dividing the Beginning Balance (\$326,594) by the Current Funding Objective (\$1,579,651). At Newington TH Streets the Funding Percentage is 20.7%
- **Allocation of the Beginning Balance.** The Beginning Balance is divided among the 44 Projected Replacements in the Replacement Reserve Inventory. The Current Funding Objective for each Projected Replacement is multiplied by the Funding Percentage and these funds are then "locked" into the account of each item.

If we relate this calculation back to our fence example, it means that the Association has not accumulated \$800 in Reserves (the Funding Objective), but rather at 20.7 percent funded, there is \$165 in the account for the fence.

- **Annual Funding.** The Recommended Annual Funding of Replacement Reserves is then calculated for each Projected Replacement. The funds allocated to the account of the Projected Replacement are subtracted from the Replacement Cost. The result is then divided by the number of years until replacement, and the result is the annual funding for each of the Projected Replacements. The sum of these is \$421,047, the Component Method Recommended Annual Funding of Replacement Reserves in the Study Year (2010).

In our fence example, the \$165 in the account is subtracted from the \$1,000 Total Replacement Cost and divided by the 2 years that remain before replacement, resulting in an annual deposit of \$417. Next year, the deposit remains \$417, but in the third year, the fence is replaced and the annual funding adjusts to \$100.

- **Adjustment to the Component Method for interest and inflation.** The calculations in the Replacement Reserve Analysis do not account for interest earned on Replacement Reserves, the effects of inflation of the cost of Projected Replacements, or a constant annual increase in Annual Funding of Replacement Reserves.

Table #2. Component Method Data - Years 1 through 30

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Starting balance	\$326,594									
Annual deposit	\$421,047	\$393,409	\$296,898	\$224,152	\$177,157	\$133,937	\$107,221	\$103,659	\$103,659	\$103,659
Expenditures	\$35,590	\$268,602	\$322,400	\$285,770	\$353,392	\$288,672	\$35,590			\$38,386
Year end balance	\$712,052	\$836,859	\$811,357	\$749,739	\$573,504	\$418,769	\$490,401	\$594,060	\$697,719	\$762,992
Cumulative Expenditures	\$35,590	\$304,192	\$626,592	\$912,362	\$1,265,754	\$1,554,426	\$1,590,015	\$1,590,015	\$1,590,015	\$1,628,401
Cumulative Receipts	\$747,641	\$1,141,051	\$1,437,949	\$1,662,100	\$1,839,257	\$1,973,194	\$2,080,416	\$2,184,075	\$2,287,734	\$2,391,393
Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Annual deposit	\$101,121	\$101,121	\$101,121	\$99,420	\$99,420	\$99,420	\$98,025	\$98,025	\$98,025	\$96,608
Expenditures			\$35,590			\$38,386			\$228,038	
Year end balance	\$864,113	\$965,235	\$1,030,767	\$1,130,187	\$1,229,607	\$1,290,642	\$1,388,666	\$1,486,691	\$1,356,678	\$1,453,286
Cumulative Expenditures	\$1,628,401	\$1,628,401	\$1,663,991	\$1,663,991	\$1,663,991	\$1,702,377	\$1,702,377	\$1,702,377	\$1,930,414	\$1,930,414
Cumulative Receipts	\$2,492,514	\$2,593,636	\$2,694,757	\$2,794,177	\$2,893,598	\$2,993,018	\$3,091,043	\$3,189,068	\$3,287,092	\$3,383,700
Year	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Annual deposit	\$96,608	\$96,608	\$95,731	\$95,731	\$95,731	\$95,072	\$95,072	\$95,072	\$94,492	\$94,492
Expenditures		\$280,498	\$310,400	\$220,384	\$339,782	\$288,672		\$38,386		
Year end balance	\$1,549,894	\$1,366,004	\$1,151,335	\$1,026,682	\$782,631	\$589,032	\$684,104	\$740,791	\$835,283	\$929,775
Cumulative Expenditures	\$1,930,414	\$2,210,912	\$2,521,312	\$2,741,696	\$3,081,478	\$3,370,150	\$3,370,150	\$3,408,536	\$3,408,536	\$3,408,536
Cumulative Receipts	\$3,480,308	\$3,576,916	\$3,672,647	\$3,768,378	\$3,864,109	\$3,959,181	\$4,054,254	\$4,149,326	\$4,243,818	\$4,338,311

CURRENT FUNDING



\$50,010 CURRENT ANNUAL FUNDING OF REPLACEMENT RESERVES
 (as reported by the Association).

\$7.95 Per unit (average), reported current monthly funding of Replacement Reserves

General. Our evaluation of the Current Association Funding assumes that the Association will continue to fund Replacement Reserves at the current level of \$50,010 per year in each of the 30 years of the Study Period.

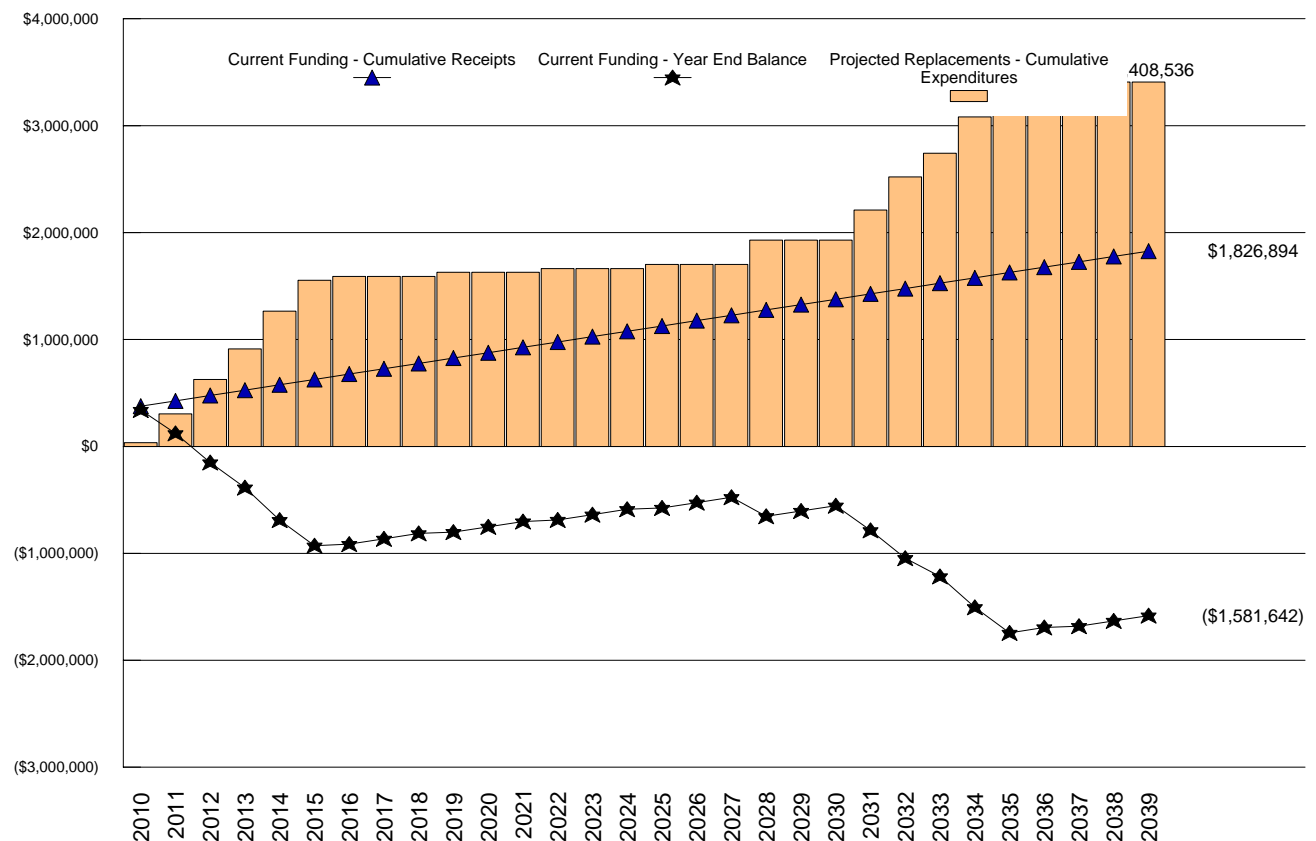
Our evaluation is based upon this Replacement Reserve Funding Level, a \$326,594 Beginning Balance, the Projected Annual Replacement Expenditures shown in Graph #1 and listed in the Replacement Reserve Inventory, and any interest, inflation rate, or constant annual increase in annual contribution adjustments discussed below.

- Evaluation. Our calculations have determined that Current Annual Funding of Replacement Reserves, as reported by the Association, is inadequate to fund Projected Replacement beginning in 2012.

The Current Annual Funding of Replacement Reserves results in insufficient funds to make Projected Replacements in 28 years of the 30-year Study Period, and a maximum shortfall of \$-1,743,296 occurs in 2035.

- Adjustment to the Current Association Funding for interest and inflation. The Calculations in the Replacement Reserve Analysis do not account for interest earned on Replacement Reserves, the effects of inflation of the cost of Projected Replacements, or a constant annual increase in Annual Funding of Replacement Reserves.
- Comparison of Current Association Funding and Average Annual Expenditure. The average annual expenditure for Projected Replacements listed in the Reserve Inventory over the 30-year Study Period is \$113,618 (see Graph #1). Current Association annual funding of Replacement Reserves is \$50,010, or approximately 44 percent of the Average Annual Expenditure.

Graph #5. Current Association Funding - Cumulative Receipts and Expenditures Graph



CURRENT FUNDING (cont'd)

Table #3. Current Funding Data - Years 1 through 30

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Starting balance	\$326,594									
Annual deposit	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010
Expenditures	\$35,590	\$268,602	\$322,400	\$285,770	\$353,392	\$288,672	\$35,590			\$38,386
Year end balance	\$341,015	\$122,423	(\$149,968)	(\$385,728)	(\$689,110)	(\$927,772)	(\$913,351)	(\$863,341)	(\$813,331)	(\$801,707)
Cumulative Expenditures	\$35,590	\$304,192	\$626,592	\$912,362	\$1,265,754	\$1,554,426	\$1,590,015	\$1,590,015	\$1,590,015	\$1,628,401
Cumulative Receipts	\$376,604	\$426,614	\$476,624	\$526,634	\$576,644	\$626,654	\$676,664	\$726,674	\$776,684	\$826,694
Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Annual deposit	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010
Expenditures			\$35,590			\$38,386			\$228,038	
Year end balance	(\$751,697)	(\$701,687)	(\$687,267)	(\$637,257)	(\$587,247)	(\$575,623)	(\$525,613)	(\$475,603)	(\$653,630)	(\$603,620)
Cumulative expenditures	\$1,628,401	\$1,628,401	\$1,663,991	\$1,663,991	\$1,663,991	\$1,702,377	\$1,702,377	\$1,702,377	\$1,930,414	\$1,930,414
Cumulative receipts	\$876,704	\$926,714	\$976,724	\$1,026,734	\$1,076,744	\$1,126,754	\$1,176,764	\$1,226,774	\$1,276,784	\$1,326,794
Year	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Annual deposit	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010	\$50,010
Expenditures		\$280,498	\$310,400	\$220,384	\$339,782	\$288,672		\$38,386		
Year end balance	(\$553,610)	(\$784,098)	(\$1,044,488)	(\$1,214,862)	(\$1,504,634)	(\$1,743,296)	(\$1,693,286)	(\$1,681,662)	(\$1,631,652)	(\$1,581,642)
Cumulative Expenditures	\$1,930,414	\$2,210,912	\$2,521,312	\$2,741,696	\$3,081,478	\$3,370,150	\$3,370,150	\$3,408,536	\$3,408,536	\$3,408,536
Cumulative Receipts	\$1,376,804	\$1,426,814	\$1,476,824	\$1,526,834	\$1,576,844	\$1,626,854	\$1,676,864	\$1,726,874	\$1,776,884	\$1,826,894

COMMENTS ON THE REPLACEMENT RESERVE ANALYSIS

- This Replacement Reserve Study has been developed in compliance with the Community Associations Institute, National Reserve Study Standards, for a Level Two - Update (with site visit and on-site review).
- Newington TH Streets has 524 units. The type of property is a community association.
- Our calculations assume that Replacement Reserves are not subject to tax.

Intentionally Left Blank

REPLACEMENT RESERVE INVENTORY GENERAL INFORMATION

Newington TH Streets - Replacement Reserve Inventory identifies 44 Projected Replacements.

- **PROJECTED REPLACEMENTS.** 44 of the items are Projected Replacements and the periodic replacements of these items are scheduled for funding from Replacement Reserves. The Projected Replacements have an estimated one-time replacement cost of \$2,412,653. Replacements totaling \$3,408,536 are scheduled in the Replacement Reserve Inventory over the 30-year Study Period.

Projected Replacements are the replacement of commonly owned physical assets that require periodic replacement and whose replacement is to be funded from Replacement Reserves.

- **EXCLUDED ITEMS.** None of the items included in the Replacement Reserve Inventory are 'Excluded Items'. Multiple categories of items are typically excluded from funding by Replacement Reserves, including but not limited to:

Tax Code. The United States Tax Code grants very favorable tax status to Replacement Reserves, conditioned on expenditures being made within certain guidelines. These guidelines typically exclude maintenance activities, partial replacements, repairs, capital improvements, and one-time only replacements.

Value. Items with a replacement cost of less than \$1,000 are typically excluded from funding from Replacement Reserves. This exclusion is made to accurately reflect how Replacement Reserves are administered. If the Association has selected an alternative level, it will be noted in the Replacement Reserve Inventory - General Comments on Page B2.

Long-lived Items. Items that when properly maintained, can be assumed to have a life equal to the property as a whole, are typically excluded from the Replacement Reserve Inventory.

Unit improvements. Items located on property owned by a single unit and where the items serve a single unit are generally assumed to be the responsibility of that unit, not the Association.

Other non-common improvements. Items owned by the local government, public and private utility companies, the United States Postal Service, Master Associations, state and local highway authorities, etc., may be installed on property that is owned by the Association. These types of items are generally not the responsibility of the Association and are excluded from the Replacement Reserve Inventory.

- **CATEGORIES.** The 44 items included in the Newington TH Streets Replacement Reserve Inventory are divided into 5 major categories. Each category is printed on a separate page, Pages B3 to B6.
- **LEVEL OF SERVICE.** This Replacement Reserve Inventory has been developed in compliance with the standards established for a Level Two - Update (with site visit and on-site review), as defined by the National Reserve Study Standards, established in 1998 by Community Associations Institute, which states:

Level II Studies are based entirely on the component inventory from a prior study. This information is adjusted to reflect changes to the inventory that are provided by the property manager, and the quantities are adjusted accordingly from field measurement and/or quantity takeoffs from to-scale drawings that are made available to us. The condition of all components is ascertained from a site visit and the visual inspection of each component by the analyst. The life expectancy and the value of components are provided based in part on these observations and the fund status and funding plan are derived from analysis of this data.

REPLACEMENT RESERVE INVENTORY - GENERAL INFORMATION (cont'd)

- **INVENTORY DATA.** Each of the 44 Projected Replacements listed in the Replacement Reserve Inventory includes the following data:

Item Number. The Item Number is assigned sequentially and is intended for identification purposes only.

Item Description. We have named each item included in the Inventory. Where the name of the item and the category are not sufficient to specifically identify the item, we have included additional information in the Comments section at the bottom of the page.

Units. We have used standard abbreviations to identify the number of units including SF-square feet, FT-feet, SY-square yard, LS-lump sum, EA-each, and PR-pair. Nonstandard abbreviations are noted in the Comments section on the page on which the abbreviation is used.

Number of Units. The methods used to develop the quantities are discussed in "Level of Service" above.

Unit Replacement Cost. We use two sources to develop the unit cost data shown in the Inventory; industry standard estimating manuals published by R. S. Means Company, Inc., and data that we have developed based upon our experience with similar replacement projects. We frequently use our best professional judgment to modify these values to reflect conditions at the site that we believe will affect the unit costs. Actual Replacement Costs may vary substantially from our estimates because of unforeseen demolition costs, engineering and architectural fees, timing of the replacement, etc.

Normal Economic Life (Yrs). The number of years that a new and properly installed item should be expected to remain in service.

Economic Life Remaining (Yrs). The estimated number of years before an item will need to be replaced. In "normal" conditions, this could be calculated by subtracting the age of the item from the Normal Economic Life of the item, but only rarely do physical assets age "normally". Some items may have longer or shorter lives depending on many factors such as environment, initial quality of the item, maintenance, etc.

Total Replacement Cost. This is calculated by multiplying the Unit Replacement Cost by the Number of Units.

- **REVIEW OF EXPENDITURES.** All expenditures from Replacement Reserves should be made only after consultation with an accounting professional.
- **PARTIAL FUNDING.** Items may have been included in the Replacement Reserve Inventory at less than 100 percent of their full quantity and/or replacement cost. This is done on items that will never be replaced in their entirety, but which may require periodic replacements over an extended period of time. The assumptions that provide the basis for any partial funding are noted on in the Comments section.

CONCRETE COMPONENTS
 PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
1	Concrete sidewalk (6%)	sf	4,187	\$8.50	60	none	\$35,590
2	Concrete sidewalk (6%)	sf	4,187	\$8.50	60	6	\$35,590
3	Concrete sidewalk (6%)	sf	4,187	\$8.50	60	12	\$35,590
4	Concrete sidewalk (6%)	sf	4,187	\$8.50	60	18	\$35,590
5	Concrete sidewalk (6%)	sf	4,187	\$8.50	60	24	\$35,590
6	Concrete sidewalk (6%)	sf	4,187	\$8.50	60	30	\$35,590
7	Concrete sidewalk (6%)	sf	4,187	\$8.50	60	36	\$35,590
8	Concrete sidewalk (6%)	sf	4,187	\$8.50	60	42	\$35,590
9	Concrete sidewalk (6%)	sf	4,187	\$8.50	60	48	\$35,590
10	Concrete sidewalk (6%)	sf	4,187	\$8.50	60	54	\$35,590
11	Concrete curb & gutter (6%)	ft	1,129	\$34.00	60	3	\$38,386
12	Concrete curb & gutter (6%)	ft	1,129	\$34.00	60	9	\$38,386
13	Concrete curb & gutter (6%)	ft	1,129	\$34.00	60	15	\$38,386
14	Concrete curb & gutter (6%)	ft	1,129	\$34.00	60	21	\$38,386
15	Concrete curb & gutter (6%)	ft	1,129	\$34.00	60	27	\$38,386
16	Concrete curb & gutter (6%)	ft	1,129	\$34.00	60	33	\$38,386
17	Concrete curb & gutter (6%)	ft	1,129	\$34.00	60	39	\$38,386
18	Concrete curb & gutter (6%)	ft	1,129	\$34.00	60	45	\$38,386
19	Concrete curb & gutter (6%)	ft	1,129	\$34.00	60	51	\$38,386
20	Concrete curb & gutter (6%)	ft	1,129	\$34.00	60	57	\$38,386

CONCRETE COMPONENTS - Replacement Costs - Subtotal \$739,755

CONCRETE COMPONENTS
 COMMENTS

Empty area for comments.

**ASPHALT PAVEMENT
 PROJECTED REPLACEMENTS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
21	Brainerd Court - Resurface	sy	900	\$31.04	20	4	\$27,936
22	Brandeis Way - Resurface	sy	4,800	\$31.04	20	4	\$148,992
23	Damper Court - Resurface	sy	1,700	\$31.04	20	5	\$52,768
24	Durer Court - Resurface	sy	4,900	\$31.04	20	1	\$152,096
25	Eucalyptus Way - Resurface	sy	1,700	\$31.04	20	5	\$52,768
26	Euclid Way - Resurface	sy	4,200	\$31.04	20	5	\$130,368
27	Getty Court - Resurface	sy	1,100	\$31.04	20	5	\$34,144
28	Gwynedd Way - Resurface	sy	4,000	\$31.04	20	3	\$124,160
29	Jenner Court - Resurface	sy	1,200	\$31.04	20	3	\$37,248
30	Kitchner Court - Resurface	sy	4,100	\$31.04	20	4	\$127,264
31	LeMoyne Lane - Resurface	sy	2,900	\$31.04	20	1	\$90,016
32	Luce Court - Resurface	sy	3,600	\$31.04	20	2	\$111,744
ASPHALT PAVEMENT - Replacement Costs - Subtotal							\$1,089,504

**ASPHALT PAVEMENT
 COMMENTS**

- Unit price of asphalt resurfacing is based on the report by community Association Engineering dated May, 2009.

ASPHALT PAVAMENT (CONT)
 PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
33	Marconi Court - Resurface	sy	1,900	\$31.04	20	3	\$58,976
34	Matisse Way - Resurface	sy	4,700	\$31.04	20	2	\$145,888
35	Moline Way - Resurface	sy	6,200	\$31.04	20	18	\$192,448
36	Red Ash Court - Resurface	sy	1,700	\$31.04	20	2	\$52,768
37	Rowanta Way - Resurface	sy	600	\$31.04	20	5	\$18,624

ASPHALT PAVAMENT (CONT) - Replacement Costs - Subtotal \$468,704

ASPHALT PAVAMENT (CONT)
 COMMENTS

- Unit price of asphalt resurfacing is based on the report by community Association Engineering dated May, 2009.

CORRECT DEFECTIVE CURB AND GUTTER
 PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
38	Durer Court - Curb and Gutter	lf	553	\$30.00	50	1	\$16,590
39	Brandeis Way - Curb and Gutter	lf	1,080	\$30.00	50	4	\$32,400
40	LeMoyne Lane - Curb and Gutter	lf	330	\$30.00	50	1	\$9,900
41	Luce Court - Curb and Gutter	lf	400	\$30.00	50	2	\$12,000
42	Brainerd Court - Curb and Gutter	lf	100	\$30.00	50	4	\$3,000
43	Gwynedd Way - Curb and Gutter	lf	900	\$30.00	50	3	\$27,000
44	Kitchner Court - Curb and Gutter	lf	460	\$30.00	50	4	\$13,800

CORRECT DEFECTIVE CURB AND GUTTER - Replacement Costs - Subtotal \$114,690

CORRECT DEFECTIVE CURB AND GUTTER
 COMMENTS

Empty area for comments.

PROJECTED ANNUAL REPLACEMENTS GENERAL INFORMATION

CALENDAR OF ANNUAL REPLACEMENTS. The 44 Projected Replacements in the Newington TH Streets Replacement Reserve Inventory whose replacement is scheduled to be funded from Replacement Reserves are broken down on a year-by-year basis, beginning on Page C2.

REPLACEMENT RESERVE ANALYSIS AND INVENTORY POLICES, PROCEDURES, AND ADMINISTRATION

- **REVISIONS.** Revisions will be made to the Replacement Reserve Analysis and Replacement Reserve Inventory in accordance with the written instructions of the Board of Directors. No additional charge is incurred for the first revision, if requested in writing within three months of the date of the Replacement Reserve Study. It is our policy to provide revisions in electronic (Adobe PDF) format only.
- **CONFLICT OF INTEREST.** Neither Miller - Dodson Associates nor the Reserve Analyst has any prior or existing relationship with this Association which would represent a real or perceived conflict of interest.
- **RELIANCE ON DATA PROVIDED BY THE CLIENT.** Information provided by an official representative of the Association regarding financial, physical conditions, quality, or historical issues is deemed reliable.
- **INTENT.** This Replacement Reserve Study is a reflection of the information provided by the Association and the visual evaluations of the Analyst. It has been prepared for the sole use of the Association and is not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.
- **PREVIOUS REPLACEMENTS.** Information provided to Miller - Dodson Associates regarding prior replacements is considered to be accurate and reliable. Our visual evaluation is not a project audit or quality inspection.
- **UPDATING.** In the first two or possibly three years after the completion of a Level One Replacement Reserve Study, we recommend the Association review and revise the Replacement Reserve Analysis and Inventory annually to take into account replacements which have occurred and known changes in replacement costs. This can frequently be handled as a Level Two or Level Three Study (as defined by the Community Associations Institute), unless the Association has completed major replacement projects. A full analysis (Level One) based on a comprehensive visual evaluation of the site should be accomplished every three to five years or after each major replacement project.
- **EXPERIENCE WITH FUTURE REPLACEMENTS.** The Calendar of Annual Projected Replacements, lists replacements we have projected to occur over the next thirty years, begins on Page C2. Actual experience in replacing the items may differ significantly from the cost estimates and time frames shown because of conditions beyond our control. These differences may be caused by maintenance practices, inflation, variations in pricing and market conditions, future technological developments, regulatory actions, acts of God, and luck. Some items may function normally during our visual evaluation and then fail without notice.
- **REVIEW OF THE REPLACEMENT RESERVE STUDY.** For this study to be effective, it should be reviewed by the Newington TH Streets Board of Directors, those responsible for the management of the items included in the Replacement Reserve Inventory, and the accounting professionals employed by the Association.

PROJECTED REPLACEMENTS - YEARS ONE TO FIFTEEN

Item	2010	\$
1	Concrete sidewalk (6%)	\$35,590
Total Scheduled Replacements		\$35,590

Item	2011	\$
24	Durer Court - Resurface	\$152,096
31	LeMoyn Lane - Resurface	\$90,016
38	Durer Court - Curb and Gutt	\$16,590
40	LeMoyn Lane - Curb and G	\$9,900
Total Scheduled Replacements		\$268,602

Item	2012	\$
32	Luce Court - Resurface	\$111,744
34	Matisse Way - Resurface	\$145,888
36	Red Ash Court - Resurface	\$52,768
41	Luce Court - Curb and Gutte	\$12,000
Total Scheduled Replacements		\$322,400

Item	2013	\$
11	Concrete curb & gutter (6%)	\$38,386
28	Gwynedd Way - Resurface	\$124,160
29	Jenner Court - Resurface	\$37,248
33	Marconi Court - Resurface	\$58,976
43	Gwynedd Way - Curb and G	\$27,000
Total Scheduled Replacements		\$285,770

Item	2014	\$
21	Brainerd Court - Resurface	\$27,936
22	Brandeis Way - Resurface	\$148,992
30	Kitchner Court - Resurface	\$127,264
39	Brandeis Way - Curb and G	\$32,400
42	Brainerd Court - Curb and G	\$3,000
44	Kitchner Court - Curb and G	\$13,800
Total Scheduled Replacements		\$353,392

Item	2015	\$
23	Damper Court - Resurface	\$52,768
25	Eucalyptus Way - Resurface	\$52,768
26	Euclid Way - Resurface	\$130,368
27	Getty Court - Resurface	\$34,144
37	Rowanta Way - Resurface	\$18,624
Total Scheduled Replacements		\$288,672

Item	2016	\$
2	Concrete sidewalk (6%)	\$35,590
Total Scheduled Replacements		\$35,590

Item	2017	\$
No Scheduled Replacements		

Item	2018	\$
No Scheduled Replacements		

Item	2019	\$
12	Concrete curb & gutter (6%)	\$38,386
Total Scheduled Replacements		\$38,386

Item	2020	\$
No Scheduled Replacements		

Item	2021	\$
No Scheduled Replacements		

Item	2022	\$
3	Concrete sidewalk (6%)	\$35,590
Total Scheduled Replacements		\$35,590

Item	2023	\$
No Scheduled Replacements		

Item	2024	\$
No Scheduled Replacements		

PROJECTED REPLACEMENTS - YEARS SIXTEEN TO THIRTY

Item	2025	\$
13	Concrete curb & gutter (6%)	\$38,386
Total Scheduled Replacements		\$38,386

Item	2026	\$
No Scheduled Replacements		

Item	2027	\$
No Scheduled Replacements		

Item	2028	\$
4	Concrete sidewalk (6%)	\$35,590
35	Moline Way - Resurface	\$192,448
Total Scheduled Replacements		\$228,038

Item	2029	\$
No Scheduled Replacements		

Item	2030	\$
No Scheduled Replacements		

Item	2031	\$
14	Concrete curb & gutter (6%)	\$38,386
24	Durer Court - Resurface	\$152,096
31	LeMoyne Lane - Resurface	\$90,016
Total Scheduled Replacements		\$280,498

Item	2032	\$
32	Luce Court - Resurface	\$111,744
34	Matisse Way - Resurface	\$145,888
36	Red Ash Court - Resurface	\$52,768
Total Scheduled Replacements		\$310,400

Item	2033	\$
28	Gwynedd Way - Resurface	\$124,160
29	Jenner Court - Resurface	\$37,248
33	Marconi Court - Resurface	\$58,976
Total Scheduled Replacements		\$220,384

Item	2034	\$
5	Concrete sidewalk (6%)	\$35,590
21	Brainerd Court - Resurface	\$27,936
22	Brandeis Way - Resurface	\$148,992
30	Kitchner Court - Resurface	\$127,264
Total Scheduled Replacements		\$339,782

Item	2035	\$
23	Damper Court - Resurface	\$52,768
25	Eucalyptus Way - Resurface	\$52,768
26	Euclid Way - Resurface	\$130,368
27	Getty Court - Resurface	\$34,144
37	Rowanta Way - Resurface	\$18,624
Total Scheduled Replacements		\$288,672

Item	2036	\$
No Scheduled Replacements		

Item	2037	\$
15	Concrete curb & gutter (6%)	\$38,386
Total Scheduled Replacements		\$38,386

Item	2038	\$
No Scheduled Replacements		

Item	2039	\$
No Scheduled Replacements		

Intentionally Left Blank

CONDITION ASSESSMENT

General Comments. Miller - Dodson Associates conducted a Reserve Study at Newington Community Association in August 2009. Newington Community Association is in average condition for a community constructed beginning in 1972. A review of the Replacement Reserve Inventory will show that we are anticipating most of the components achieving their normal economic lives.

The following comments pertain to the larger, more significant components in the Replacement Reserve Inventory and to those items that are unique or deserving of attention because of their condition or the manner in which they have been treated in the Replacement Reserve Analysis or Inventory.

SITE IMPROVEMENTS

Asphalt Pavement. The site includes asphalt pavement for vehicle access and parking. In general, the asphalt pavement is in fair condition with multiple areas of open cracks and some minor alligatoring. We have based our costs on the recommendations of the "Pavement Assessment Report" dated May 2009, prepared by Community Association Engineering. The cost of \$31.04 per square yard was determined by dividing the total estimated cost of \$1,365,680 by 44,000 square yards. Because of the costs involved and the thickness of the overlay that has been recommended, we recommend that the association obtain a second opinion on pavement replacement giving consideration to keeping the existing pavement as a base and applying a fabric to prevent reflective cracking and a thinner overlay. A contact for the second opinion is Mr. Doug Gardner of Gardner James Engineering, Inc. who also is a specialist in pavement design. Phone 301-953-2900.



The Association maintains an inventory of 55,700 square yards of asphalt pavement.

The main defect is open cracks. There are locations where open cracks are allowing water to penetrate to the asphalt base and the bearing soils beneath the pavement. This water will erode the base accelerating the deterioration of the asphalt pavement. If the cracks have allowed the deterioration of the base materials and the bearing soil, the damaged areas should be removed and replaced. All other cracks should be cleaned and filled.

As a rule of thumb, asphalt should be overlaid when approximately five percent of the surface area has become cracked or has failed. The normal service life of asphalt pavement is typically 18 to 20 years.

In order to maintain the condition of the pavement throughout the community and to insure the longest life of the asphalt, we recommend a systematic and comprehensive maintenance program that includes:

1. Crack Sealing. All cracks should be sealed with an appropriate sealing compound to prevent water infiltration through the asphalt compound into the base. This repair should be done annually. This is an entirely different process from the seal coating discussed below. Crack sealing is normally considered a maintenance activity and is not funded from Reserves. Areas of extensive cracking or deterioration that cannot be made watertight by crack sealing should be cut out and patched.
2. Cleaning. Long-term exposure to oil or gas breaks down asphalt. Because this asphalt pavement is generally not used for long term parking, it is unlikely that frequent cleaning will be necessary. When necessary, spill areas should be cleaned, or if deterioration has penetrated

the asphalt, patched. This is a maintenance activity, and we have assumed that it will not be funded from Reserves.

3. **Seal Coating.** The asphalt should be seal coated every three to five years. For this maintenance activity to be effective in extending the life of the asphalt, the crack sealing and cleaning of the asphalt, discussed above should be done first.

Pricing used in the study is based on a recent contract for a two-inch overlay and reflects the current local market.

Asphalt Paths. The Association maintains an inventory of approximately 42,240 square feet of asphalt path throughout the community. The overall condition of these paths is poor with multiple defects throughout the community. We have scheduled 30% of the paths to be replaced every 10 years beginning in 2011.



The defects noted include the following:

- **Cracks.** There are multiple locations where open cracks are allowing water to penetrate to the asphalt base and the bearing soils beneath the pavement. This water will erode the base accelerating the deterioration of the asphalt pavement. If the cracks have allowed the deterioration of the base materials and the bearing soil, the damaged areas should be removed and replaced. All other cracks should be cleaned and filled.
- **Buckling.** Sections of the asphalt pavement in the paths have buckled as a result of thermal expansion of the asphalt or shifting in the asphalt's base material. Buckling results in the creation of trip hazards and is corrected by removing and replacing the damaged section of asphalt.
- **Potholes.** There are a number of locations where potholes have formed as the result of the failure of the underlying base material or the surface material. Potholes pose a trip hazard. Repair will require removal of the asphalt and base material, installation and compaction of new base material, and resurfacing with asphalt.

- **Tree Root Damage.** There are locations where roots from trees planted near the asphalt surface have pushed up through the asphalt, causing cracks and heaving. Repair of these areas will require removal of the asphalt and the tree roots.
- **Crumbling.** Portions of the asphalt paths are failing due to crumbling. Crumbling is the final stage in asphalt failure. At this point, water has penetrated and damaged the base, leading the asphalt unsupported. The asphalt then breaks into small, loose fragments. Crumbling poses a trip hazard. Repair will require removal of the failed asphalt and replacement.
- **Physical Damage.** There are several locations where physical damage to the asphalt path has occurred. Physical damage is typically caused by falling tree limbs, or any other source that results in sufficient damage to the surface of the asphalt to create a tripping hazard. Repair of physical damage generally requires replacement of that section of asphalt.

Concrete Components. The concrete components include the community sidewalks, pool deck and curb and gutter. The pool deck is covered under the swimming pool section. The Association maintains an inventory of approximately 69,780 square feet of concrete sidewalk and 18,800 feet of curb and gutter. The overall condition of the concrete sidewalks and curb and gutter is fair with multiple areas of defects. The defects noted include the following:

- **Cracking.** There are sections of the concrete flatwork that have cracked creating trip hazards.
- **Heaving/Settlement.** Sections of the concrete flatwork have heaved or settled relative to their adjacent sections, creating trip hazards.
- **Scaling and Flaking.** Several sections of the concrete flatwork are scaling and flaking. Scaling and flaking is the loss of the surface mortar in concrete. It is typically caused by water freezing within the concrete. Once started, scaling and flaking can be expected to continue to grow as a result of exposure of the concrete to freeze-thaw cycles. These scaled sections are creating trip hazards.

The streets which have the most severe curb and gutter problems have been scheduled to be corrected at the time the street is being repaved.

The standards we used for recommending replacement are as follows:

1. Trip hazard, 0.5 inch height difference.
2. Severe cracking.
3. Severe spalling
4. Uneven riser heights on steps.
5. Steps with risers in excess of 8.25 inches.

Because it is highly unlikely that all of the community's concrete components will fail and require replacement in the period of the study, we have programmed funds for the replacement of 60% of the inventory and spread those funds over a 60-year timeframe to reflect the incremental nature of this work. This approach assumes a failure rate of 1% per year.

CLUBHOUSE EXTERIOR

Asphalt Shingle Roofing. The clubhouse has an asphalt shingle roof in good condition. We have estimated the remaining useful life of the roof based on the conditions seen at the site as well as the age of the roof. We have assumed that when the roof eventually will require replacement and will be replaced with a 25-year roof. We have assumed that the gutters and downspouts will be replaced when the roofs are replaced.

Brickwork. The brickwork on the buildings is in good condition. Brick is usually considered to be a life of structure item and therefore excluded from reserve funding. Because weather and other conditions result in the slow deterioration of the mortar in the brick joints, we have included funding in the Reserve Analysis for tuckpointing. We have assumed that ten percent of the brick will require tuckpointing every ten years.



RECREATIONAL FACILITIES

Swimming Pool. The community operates an outdoor pool and wading pool of concrete construction with a concrete deck. Listed below are the major components of the pool facilities:



- **Pool Shell.** The shell for the swimming pool is in good. Pool shells normally have a finite life of approximately 65 years. At that time it may not be necessary to replace the entire structure. However, it is prudent to anticipate a major expenditure for replacement of underground lines and sections of the pool. Based on our research, we have found it to be prudent to program \$65 per square foot of pool surface to cover these needs.

- **Pool Deck.** The pool has a concrete deck. The overall condition of the deck is good with some cracks developing. Because it is highly unlikely that all of the community's concrete pool deck sections will fail and require replacement at the same time, we have divided the deck into 5 equal components in the Reserve Analysis and have spread their replacement over a 30 year period.



- **Whitecoat.** The pool whitecoat is in good condition. It was replaced in 2008. We have assumed a service life of 10 years for the pool whitecoat.
- **Coping.** The pool is edged with masonry coping. The coping is in good condition.
- **Waterline Tile.** The waterline tile is in good condition. We have assumed that the waterline tile will be replaced or restored when the pool is whitecoated.
- **Pump and Filter System.** The filter system is in good operating condition. We have assumed a service life of 20 years for the filter system, and 10 years for the pumps

Tennis Courts. The community maintains two tennis courts. The overall condition of these courts is good. Listed below are the major components of the tennis court facilities:

- **Asphalt Pavement.** The asphalt pavement for the tennis court is in good condition with no cracks and splits that extend into the playing surface. We have assumed a service life of 20 years for the asphalt.
- **Color Coat.** The color coat on the tennis courts is in good condition with no major defects in its finish.
- **Fencing.** The fencing installed around the tennis courts is chain link and in fair condition. . The fencing and posts have corroded in several locations. We have assumed that the fencing will be replaced when the asphalt pavement is replaced.



Tot Lots. The five tot lots, except for a loose center post on the Getty tot lot, are in good condition for their age. The mulch is in excellent condition.

The center post of the swing set at Getty is loose and needs to be properly secured.



This Condition Assessment is based upon our visual survey of the property. The sole purpose of the visual survey was an evaluation of the common elements of the property to ascertain the remaining useful life and the replacement costs of these common elements. Our evaluation assumed that all components met building code requirements in force at the time of construction. Our visual survey was conducted with care by experienced persons, but no warranty or guarantee is expressed or implied.

End of Condition Assessment

1. COMMON INTEREST DEVELOPMENTS - AN OVERVIEW

Over the past 40 years, the responsibility for community facilities and infrastructure around many of our homes has shifted from the local government to Community Associations. Thirty years ago, a typical new town house abutted a public street on the front and a public alley on the rear. Open space was provided by a nearby public park and recreational facilities were purchased ala carte from privately owned country clubs, swim clubs, tennis clubs, and gymnasiums. Today, 60% of all new residential construction, i.e. townhouses, single family homes, condominiums, and cooperatives, is in Common Interest Developments (CID). In a CID, a home owner is bound to a Community Association that owns, maintains, and is responsible for periodic replacements of various components that may include the roads, curbs, sidewalks, playgrounds, street lights, recreational facilities, and other community facilities and infrastructure.

The growth of Community Associations has been explosive. In 1965 there were only 500 Community Associations in the United States. According to the U.S. Census, there were 130,000 Community Associations in 1990. Community Associations Institute (CAI), a national trade association, estimates there were more than 200,000 Community Associations in the year 2000, and that the number of Community Associations will continue to multiply.

The shift of responsibility for billions of dollars of community facilities and infrastructure from the local government and private sector to Community Associations has generated new and unanticipated problems. Although Community Associations have succeeded in solving many short term problems, many Associations have failed to properly plan for the tremendous expenses of replacing community facilities and infrastructure components. When inadequate replacement reserve funding results in less than timely replacements of failing components, home owners are exposed to the burden of special assessments, major increases in Association fees, and a decline in property values.

2. REPLACEMENT RESERVE STUDY

The purpose of a Replacement Reserve Study is to provide the Association with an inventory of the common community facilities and infrastructure components that require periodic replacement, a general view of the condition of these components, and an effective financial plan to fund projected periodic replacements. The Replacement Reserve Study consists of the following:

- Replacement Reserve Study Introduction. The introduction provides a description of the property, reviews the intent of the Replacement Reserve Study, and lists documents and site evaluations upon which the Replacement Reserve Study is based.
- Section A Replacement Reserve Analysis. Many components owned by the Association have a limited life and require periodic replacement. Therefore it is essential the Association have a financial plan that provides funding for the timely replacement of these components in order to protect the safety, appearance, and value of the community. In conformance with American Institute of Certified Public Accountant guidelines, Section A Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves by two generally accepted accounting methods; the Cash Flow Method and the Component Method. Section A Replacement Reserve Analysis includes graphic and tabular presentations of these methods and current Association funding.
- Section B Replacement Reserve Inventory. The Replacement Reserve Inventory lists the commonly-owned components within the community that require periodic replacement using funding from Replacement Reserves. The Replacement Reserve Inventory also provides information about components excluded from the Replacement Reserve Inventory whose replacement is not scheduled for funding from Replacement Reserves.

Replacement Reserve Inventory includes estimates of the normal economic life and the remaining economic life for those components whose replacement is scheduled for funding from Replacement Reserves.
- Section C Projected Annual Replacements. The Calendar of Projected Annual Replacements provides a year-by-year listing of the Projected Replacements based on the data in the Replacement Reserve Inventory.
- Section D Condition Assessment. Several of the items listed in the Replacement Reserve Inventory are discussed in more detail. The Condition Assessment includes a narrative and photographs that document conditions at the property observed during our visual evaluation.
- Section E Attachments. The Appendix is provided as an attachment to the Replacement Reserve Study. Additional attachments may include supplemental photographs to document conditions at the property and additional information specific to the property cited in the Conditions Assessment (i.e. Consumer Product Safety Commission, Handbook for Public Playground Safety, information on segmental retaining walls, manufacturer recommendations for asphalt shingles or siding, etc).

3. METHODS OF ANALYSIS

The Replacement Reserve industry generally recognizes two different methods of accounting for Replacement Reserve Analysis. Due to the difference in accounting methodologies, these methods lead to different calculated values for the Minimum Annual Contribution to the Reserves. The results of both methods are presented in this report. The Association should obtain the advice of its accounting professional as to which method is more appropriate for the Association. The two methods are:

- **Component Method.** This method is a time tested mathematical model developed by HUD in the early 1980s. It treats each item in the replacement schedule as an individual line item budget. Generally, the Minimum Annual Contribution to Reserves is higher when calculated by the Component Method. The mathematical model for this method works as follows:

First, the total Current Objective is calculated, which is the reserve amount that would have accumulated had all of the items on the schedule been funded from initial construction at their current replacement costs. Next, the Reserves Currently on Deposit (as reported by the Association) are distributed to the components in the schedule in proportion to the Current Objective. The Minimum Annual Deposit for each component is equal to the Estimated Replacement Cost, minus the Reserves on Hand, divided by the years of life remaining.

- **Cash Flow Method.** The Cash Flow Method is sometimes referred to as the "Pooling Method." It calculates the minimum constant annual contribution to reserves (Minimum Annual Deposit) required to meet projected expenditures without allowing total reserves on hand to fall below the specified minimum level in any year. This method usually results in a calculated requirement for annual contribution somewhat less than that arrived at by the Component Method of analysis.

First, the Minimum Recommended Reserve Level to be Held on Account is determined based on the age, condition, and replacement cost of the individual components. The mathematical model then allocates the estimated replacement costs to the future years in which they are projected to occur. Based on these expenditures, it then calculates the minimum constant yearly contribution (Minimum Annual Deposit) to the reserves necessary to keep the reserve balance at the end of each year above the Minimum Recommended Reserve Level to be Held on Account. The Cash Flow Analysis assumes that the Association will have authority to use all of the reserves on hand for replacements as the need occurs. This method usually results in a Minimum Annual Deposit which is less than that arrived at by the Component Method.

- **Adjusted Cash Flow Analysis.** This program has the ability to modify the Cash Flow Method to take into account forecasted inflation and interest rates, thereby producing an Adjusted Cash Flow Analysis. Attempting to forecast future inflation and interest rates and the impact of changing technology is highly tenuous. Therefore, in most cases it is preferable to make a new schedule periodically rather than attempt to project far into the future. We will provide more information on this type of analysis upon request.

4. REPLACEMENT RESERVE STUDY DATA

- **Identification of Reserve Components.** The Reserve Analyst has only two methods of identifying Reserve Components; 1) information provided by the Association and 2) observations made at the site. It is important that the Reserve Analyst be provided with all available information detailing the components owned by the Association. It is our policy to request such information prior to bidding on a project and to meet with the individuals responsible for maintaining the community after acceptance of our proposal. After completion of the Study, the Study should be reviewed by the Board of Directors, individuals responsible for maintaining the community, and the Association's accounting professionals. We are dependent upon the Association for correct information, documentation, and drawings.

- **Unit Costs.** Unit costs are developed using nationally published standards and estimating guides and are adjusted by state or region. In some instances, recent data received in the course of our work is used to modify these figures.

Contractor proposals or actual cost experience may be available as part of the Association records. This is useful information which should be incorporated into your report. Please bring any such available data to our attention, preferably before the report is commenced.

- **Replacement vs. Repair and Maintenance.** A Replacement Reserve Study addresses the required funding for Capital Replacement Expenditures. This should not be confused with operational costs or cost of repairs or maintenance.

5. DEFINITIONS

Adjusted Cash Flow Analysis. Cash flow analysis adjusted to take into account annual cost increases due to inflation and interest earned on invested reserves. In this method, the annual contribution is assumed to grow annually at the inflation rate.

Annual Deposit if Reserves Were Fully Funded. Shown on the Summary Sheet A1 in the Component Method summary, this would be the amount of the Annual Deposit needed if the Reserves Currently on Deposit were equal to the Total Current Objective.

Cash Flow Analysis. See Cash Flow Method, above.

Component Analysis. See Component Method, above.

Contingency. An allowance for unexpected requirements. Roughly the same as the Minimum Recommended Reserve Level to be Held on Account used in the Cash Flow Method of analysis.

Critical Year. In the Cash Flow Method, a year in which the reserves on hand are projected to fall to the established minimum level. See Minimum Recommended Reserve Level to be Held on Account.

Current Objective. This is the reserve amount that would have accumulated had the item been funded from initial construction at its current replacement cost. It is equal to the estimated replacement cost divided by the estimated economic life, times the number of years expended (the difference between the Estimated Economic Life and the Estimated Life Left). The Total Current Objective can be thought of as the amount of reserves the Association should now have on hand based on the sum of all of the Current Objectives.

Cyclic Replacement Item. A component item that typically begins to fail after an initial period (Estimated Initial Replacement), but which will be replaced in increments over a number of years (the Estimated Replacement Cycle). The Reserve Analysis program divides the number of years in the Estimated Replacement Cycle into five equal increments. It then allocates the Estimated Replacement Cost equally over those five increments. (As distinguished from Normal Replacement Items, see below)

Estimated Economic Life. Used in the Normal Replacement Schedules. This represents the industry average number of years that a new item should be expected to last until it has to be replaced. This figure is sometimes modified by climate, region, or original construction conditions.

Estimated Economic Life Left. Used in the Normal Replacement Schedules. Number of years until the item is expected to need replacement. Normally, this number would be considered to be the difference between the Estimated Economic Life and the age of the item. However, this number must be modified to reflect maintenance practice, climate, original construction and quality, or other conditions. For the purpose of this report, this number is determined by the Reserve Analyst based on the present condition of the item relative to the actual age.

Estimated Initial Replacement. For a Cyclic Replacement Item (see above), the number of years until the replacement cycle is expected to begin.

Estimated Replacement Cycle. For a Cyclic Replacement Item, the number of years over which the remainder of the component's replacement occurs.

Minimum Annual Deposit. Shown on the Summary Sheet A1. The calculated requirement for annual contribution to reserves as calculated by the Cash Flow Method (see above).

Minimum Deposit in the Study Year. Shown on the Summary Sheet A1. The calculated requirement for contribution to reserves in the study year as calculated by the Component Method (see above).

Minimum Recommended Reserve Level to be Held on Account. Shown on the Summary Sheet A1, this number is used in the Cash Flow Method only. This is the prescribed level below which the reserves will not be allowed to fall in any year. This amount is determined based on the age, condition, and replacement cost of the individual components. This number is normally given as a percentage of the total Estimated Replacement Cost of all reserve components.

Normal Replacement Item. A component of the property that, after an expected economic life, is replaced in its entirety. (As distinguished from Cyclic Replacement Items, see above.)

Normal Replacement Schedules. The list of Normal Replacement Items by category or location. These items appear on pages designated.

Number of Years of the Study. The number of years into the future for which expenditures are projected and reserve levels calculated. This number should be large enough to include the projected replacement of every item on the schedule, at least once. This study covers a 40-year period.

One Time Deposit Required to Fully Fund Reserves. Shown on the Summary Sheet A1 in the Component Method summary, this is the difference between the Total Current Objective and the Reserves Currently on Deposit.

Reserves Currently on Deposit. Shown on the Summary Sheet A1, this is the amount of accumulated reserves as reported by the Association in the current year.

Reserves on Hand. Shown in the Cyclic Replacement and Normal Replacement Schedules, this is the amount of reserves allocated to each component item in the Cyclic or Normal Replacement schedules. This figure is based on the ratio of Reserves Currently on Deposit divided by the total Current Objective.

Replacement Reserve Study. An analysis of all of the components of the common property of the Association for which a need for replacement should be anticipated within the economic life of the property as a whole. The analysis involves estimation for each component of its estimated Replacement Cost, Estimated Economic Life, and Estimated Life Left. The objective of the study is to calculate a recommended annual contribution to the Association's Replacement Reserve Fund.

Total Replacement Cost. Shown on the Summary Sheet A1, this is total of the Estimated Replacement Costs for all items on the schedule if they were to be replaced once.

Unit Replacement Cost. Estimated replacement cost for a single unit of a given item on the schedule.

Unit (of Measure). Non-standard abbreviations are defined on the page of the Replacement Reserve Inventory where the item appears. The following standard abbreviations are used in this report:

EA: each FT: feet LS: lump sum PR: pair SF: square feet SY: square yard

6. LIST OF RECOMMENDED REPAIRS - PROCEDURES

A List of Recommended Repairs is offered as a supplemental report to the Replacement Reserve Study (at an additional fee) to assist the Association in understanding the financial implications of all items owned by the Association, not just the items included for funding by Replacement Reserves listed in the Replacement Reserve Inventory. The following information relates to the List of Recommended Repairs:

- Repair costs. Cost range estimates given in the repair list assume that all work by a given trade will be done together as a single project. If repairs are done piece-meal, the costs would be significantly higher. The costs of any repairs to be funded out of the Reserve Fund should be subtracted from the Reserves Currently on Deposit figure. The Board or Property Manager should coordinate this decision with the Reserve Analyst as part of the revision process.
- Completion of repairs. The Replacement Reserve Analysis assumes that all repairs cited in the Repair List will be completed within a twelve-month period of time. Estimated Life Left in the Replacement Reserve Study has been factored under this assumption. Any deletions or delays of the projects included in the List of Recommended Repairs may result in major inaccuracies in the Replacement Reserve Analysis.
- Safety issues. If safety issues have been cited, they should be given the highest priority and should be done immediately upon receipt of this report. The Board must recognize that from a liability standpoint, they have been made aware of the existence of these unsafe conditions, if any, once the report is delivered for their review.
- Unit costs. Nationally published standards and standard estimating manuals have been used in the development of this report. Contractor proposals or actual cost experience may be available as part of the Association records. We will adjust our figures to conform to your experience if the material or information is disclosed to us and/or made available for our use.